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THE

AMERICAN JOURNAL

OF THE

MEDICAL SCIENCES.

VOL. III.

PHILADELPHIA:

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TO READERS AND CORRESPONDENTS.

Dr. WRIGHT's communication has been received.

Dr. BARTLETT's paper has been crowded out of the present number; it shall appear in our next.

Our other correspondents shall receive private answers.

We have received the following publications:—

Transactions of the Medico-Chirurgical Society of London, Vol. XIV.

Transactions of the Medico-Chirurgical Society of Edinburg, Vol. III. Part 1.

Laws of Physiology; translated from the Italian of Il Signor Dott. B. MOJON, Professor Emeritus in the Royal University of Genoa, and Member of many learned bodies. With additions, and a Physiological Table of Man. Dedicated by permission to Sir ASTLEY COOPER, Bart. F. R. S., Surgeon to the king. By GEORGE R. SKENE, Member of the Royal College of Surgeons in London, and of the Medical and Chirurgical Society, &c. &c. &c. London, 1827, (from the author.)

A Manual of Modern Surgery, founded upon the Principles and Practice lately taught by Sir ASTLEY COOPER, Bart. F. R. S., Surgeon to the king, consulting surgeon to Guy's Hospital; and JOSEPH HENRY GREEN, Esq. F. R. S., Professor of Anatomy to the Royal Academy, Surgeon to, and Lecturer on Surgery, St. Thomas's Hospital. Embellished with a portrait of Sir ASTLEY COOPER. Edited by THOMAS CASTLE, F. L. S. Member of the Royal College of Surgeons, &c. London, 1828, (from the editor.)

Se la Febbre Gialla sia o no un Contagio, quistione Agitata dai Medici Europei ed Americani. Memoria del Cav. Dott. G. PALLONI. Livorno, 1824.

Compendium of Operative Midwifery; or the Manual and Instrumental Operations of Preternatural Labours, reduced to the greatest simplicity; preceded by an Investigation of the Mechanism of Labour. From the French of JULIUS HATIN, M. D. P. &c. &c. Translated by RICHARD TUITE, M. D. &c. New York. CHARLES S. FRANCIS, 1828, 12mo. pp. 171, (from the publishers.)

Remarks on the Importance of the Teeth; on their Diseases and Modes of Cure; with directions for Forming Regular and Beautiful sets of Teeth, and for the Preservation of their Health and Beauty. By SAMUEL S. FITCH, Dentist. Philad. 1828. Pamphlet, pp. 27. Pl. I. (from the author.)

Journal des Progrès des Sciences et Institutions Médicales en Europe, en Amérique, &c. Vols. IX. and X. (in exchange.)

Annales de la Médecine Physiologique, for April, May, June, and July, 1828. (in exchange.)

Revue Médicale Française et Étrangère, et Journal de Clinique de l'Hôtel Dieu, et la Charité, et des Grands Hôpitaux de Paris, for May and June, (in exchange.)

Journal Général de Médecine, de Chirurgie, et de Pharmacie Français et Etrangères, ou Recueil Périodique des Travaux de la Société de Médecine de Paris; Rédigé. Par A. N. GENDRIN, l'un de ses Membres, from January to July, 1828, (in exchange.)

Archives Générales de Médecine, January to June, 1828, (in exchange.)

Bulletin des Sciences Médicales, from January to July, (in exchange.)

Revue Encyclopédique, April, May, and June, 1828, (in exchange.)

Journal der Chirurgie und Augen Heilkunde, herausgegeben, von C. F. v. Gräfe und Ph. v. Walther, February, 1828, (in exchange.)

Notizen ans den Gebiete der natur und Heilkunde gesammelt und mitgetheilt. Von Ludwig Fr. von Froriep, 1827, (in exchange.)

The London Medical and Physical Journal, for July, August, and September, (in exchange.)

The London Medical Gazette, Vol. I, Nos. 16 to 33, (in exchange.)

The London Medical and Surgical Journal, for July, August, and September, (in exchange.)

The Medico-Chirurgical Review, for July, 1828, (in exchange.)

Nuovo Giornale de Literati, for 1827, (in exchange.)

The Transylvania Journal of Medicine and the Associate Sciences, Nos. 1, 2, 3, (in exchange.)

The Western Journal of the Medical and Physical Sciences, for April and July, 1828.

The Boston Medical and Surgical Journal, Nos. 23 to 36, inclusive, (in exchange.)

The New York Medical and Physical Journal, Nos. 1 and 2, (in exchange.)

The North American Medical and Surgical Journal, for October, 1828, (in exchange.)

For the gratification of our contributors we continue the references to the works, in which they will find notices of their communications; these references are, of course, restricted to the Journals received during the preceding three months.

Professor PHYSICK will find his instrument for excision of the tonsils and truncation of the uvula, noticed in the *Medico-Chirurgical Review*, and the *London Medical and Physical Journal*, for July, 1828; and in the *Journal des Progrès*, Vol. X.

Professor CHAPMAN's Observations on the use of Tobacco in Croup, are copied into the *Nouvelle Bibliothèque Medicale*, for July, 1828.

Professor DEWEES's paper on *Secale Cornutum* is copied into the *London Medical Gazette*, Vol. I. No. 24, and noticed in the *Medico-Chirurgical Review*, for July 1828. His paper on *Bloody Infiltrations into the Labia Pudendi*, is noticed in Froriep's *Notizen*, for January, 1828.

Professor MOTT's paper on Amputation at the Hip-Joint is noticed in *Froriep's Notizen*, for November, 1827, and his Case of Calcareous Degeneration of the Scrotum, in the same Journal, for January, 1828.

Professor HORNER's Observations on Mucous Membranes are copied into the *Journal Universel des Sciences Médicales*, for March and April, 1828, and noticed in the *Annales de la Méd. Physiol.* for July, 1828.

Professor HARE's Method of Detecting minute quantities of Opium is copied in the *Archives Général de Méd.* for January, 1828, *London Medical and Physical Journal* for September, 1828, and *Froriep's Notizen* for December, 1827.

Professor SEWALL's Cases of Injury of the Head, are noticed in the *London Medical and Surgical Journal* for August, 1828, and the *London Medical and Physical Journal* for September, 1828.

Dr. JACKSON's Clinical Reports are noticed in the *Medico-Chirurgical Review* for July, 1828.

Dr. GODMAN's Case of Anomalous Vision is noticed in the *London Medical and Physical Journal* for August, 1828, *Archives Général* for April, 1828, and the *Quarterly Journal of Science, Literature, and the Arts*, for July, 1828.

Dr. WHITE's Successful Ligature of the Internal Iliac, in the *Medico-Chirurgical Review*, and *London Medical and Physical Journal* for July, 1828, and *Journal des Progrès*, Vol. IX.

Dr. HOSACK on Removal of the Tonsils, in the *Medico-Chirurgical Review* for July, 1828; *Western Journal of the Medical and Physical Sciences*, April, 1828, and *London Medical and Physical Journal*, August, 1828.

Dr. IVES's Case of Poisoning by Cantharides, in the *London Medical and Physical Journal* for July, 1828; *Revue Médicale*, May, 1828, and *Nouv. Bib. Méd.* July, 1828.

Dr. MOORE on Volatile Alkali in Bites of Poisonous Serpents, in the *Journal des Progrès*, Vol. IX. and *Western Medical and Physical Journal*, April, 1828.

Mr. CARPENTER on Rhubarbarine, in the *Journal des Progrès*, Vol. IX.—On Piperine, in the *London Medical and Physical Journal*, August, 1828.

Dr. STEVENSON on Charcoal, in *Froriep's Notizen* for December, 1827.

Dr. RUSH's Case of Pulsation of the Veins, in *Froriep's Notizen* for December, 1827.

Dr. BEATTY's Case of Luxation of the Astragalus, in *Froriep's Notizen* for December, 1827.

Dr. FEARN's Experiments on Tendons, in *Froriep's Notizen* for January, 1828.

Dr. COMSTOCK's Case of Aneurism of the Aorta, in *Froriep's Notizen* for October, 1827.

Dr. HEISKELL's Case of Extra-Uterine Fœtation, in the *London Medical and Physical Journal*, and *London Medical and Surgical Journal* for August, 1828.

Dr. WALTON's Case of Organic Disease of the Heart, in the *London Medical*

and Physical Journal, and London Medical and Surgical Journal, for August, 1828.

Dr. WELLS's Case of Scrotal Tumour, in the London Medical and Surgical Journal for August, 1828.

Dr. STEDMAN's Case of Apoplexy cured by Opening the Radial Artery, in the Archives Général, January, 1828.

Dr. ARNOLD's Case of Paruria Erratica, in the Archives Général, April, 1828, and Journal Universel for February, 1828.

Dr. WASHINGTON's Case of Gun-shot Wound, in the Journal des Progrès, Vol. IX.

Dr. SKINNER's Case of Tetanus, in the Journal des Progrès, Vol. X.

Dr. GRIFFITH's Case of Salivation from the use of Tartar Emetic Ointment, in the London Medical and Physical Journal for September, 1828.

Dr. PENNOCK's Experiments on the Use of Cupping-glasses in Poisoned Wounds, in the London Medical and Physical Journal for September, 1828.

CONTENTS.

ORIGINAL COMMUNICATIONS.

ESSAYS.

ART.	PAGE.
I. On an Operation for the Cure of Natural Fissure of the Soft Palate. By John C. Warren, M. D. Professor of Anatomy and Surgery in the Medical Institution of Harvard University, Boston - - - - -	1
II. Account of the Dengue, as it appeared in Charleston, S. C. during the Summer of 1828. By S. Henry Dickson, M. D. Professor of the Institutes and Practice of Medicine in the Medical College of South Carolina - - - - -	3
III. Reports of Cases treated in the Baltimore Alms-house Infirmary. By Thomas H. Wright, M. D. Physician to the Institution - - - - -	15
IV. Case of Axillary Aneurism removed by the application of a Ligature to the Subclavian Artery. By Dr. Edward W. Wells, Physician and Surgeon in Maracaybo. Communicated by Felix Pascalis, M. D. of New York - - - - -	28
V. On the Topography and Diseases of Western Pennsylvania. By L. Callaghan, Member of the Faculty of Medicine, and Licentiate of the Faculty of Physicians and Surgeons of Glasgow - - - - -	34
VI. On Paruria Erratica, or Uroplania. By Salmon Augustus Arnold, M. D. of Providence, Rhode Island - - - - -	41
VII. On the Respiration of Cold Air in Pulmonary Diseases. By C. Drake, M. D. of New York. Communicated in a letter to Dr. Chapman - - - - -	53
VIII. Observations tending to ascertain whether the Ancients were acquainted with the Disease known to us familiarly by the name of Croup. By John Redman Coxe, M. D. Professor of Materia Medica and Pharmacy in the University of Pennsylvania - - - - -	56
IX. Two Cases illustrative of the Pathology of the Nervous System. By William E. Horner, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania - - - - -	87
X. Case of Organic Disease of the Brain. By John Ware, M. D. of Boston	94
XI. An Account of a Case of Osteo-sarcoma of the Left Clavicle, in which Exsection of that Bone was successfully performed. By Valentine Mott, M. D. Professor of Surgery in Rutgers College, New York - - - - -	100
XII. Case of Compound Dislocation of the Ankle-joint, with a Dislodgment of the Astragalus. By S. Pomeroy White, M. D. of Hudson, N. Y. - - - - -	109
XIII. Case of Bloody Infiltrations into the Labia Pudendi. By James Guild, M. D. of Tuscaloosa, Alabama. Communicated in a letter to Dr. Dewees - - - - -	111

MEDICAL EDUCATION AND INSTITUTIONS.

- XIV. Sketch of the History of the Massachusetts Medical Society, with an account of their Medical Publications. By E. Hale, M. D. Member of the Society - - - - - 113

REVIEW.

- XV. On the Nature and Treatment of Tetanus and Hydrophobia, with some Observations on a Natural Classification of Diseases in General. By Robert Reid, M. D. Licentiate of King and Queen's College of Physicians in Dublin, Member of the Royal Medical Society of Edinburgh, &c. - - - - - 133

BIBLIOGRAPHICAL NOTICES.

1. Versuch einer Medicinisch-Chirurgischen Diagnostik, in Tabellen oder Erkenntniss und Unterscheidung der innern und aeußern Krankheiten, mittels Nebeneinanderstellung der ähnlichen Formen. Von D. Karl Gustav. Schmalz, Arzte und Physikus zu Königsbrück. [Dresden and Leipzig; folio, pp. 264. Fourth edition, enlarged and improved.]
An attempt at Medical and Surgical Diagnosis, in Tables; or Recognition and Discrimination of Internal and External Diseases, by comparison of their resembling forms. By Charles Gustavus Schmalz, M. D. &c. - - - - - 153
2. Se la Febbre Gialla sia o no un Contagio, Quistione Agitata dai Medici Europei ed Americani. Memoria del Cav. Dott. G. Palloni. Livorno, pp. 160. 8vo. - - - - - 154
3. Mémoire Physiologique sur le Cerveau. Par M. Magendie. Lu dans la sceance Publique de l'Académie Royale des Sciences, le 16 Juin, 1828. [Brochure, 4to. pp. 17.] - - - - - 157
4. Abregé pratique des Maladies de la Peau, d'après les Auteurs les plus estimés et surtout d'après les Documens puisés dans la Clinique de M. le Dr. Biet, Medicin de l'Hopital Saint Louis. Par MM. A. Cazenave et H. E. Schedel, Docteurs en Medicine, anciens internes de l'Hopital Saint Louis, &c. &c. Paris, 1828, pp. 527, 8vo. - - - - - 162
5. Traité des Maladiès des Enfans nouveaux-nés et a la Mamelle. Paris, 1828, pp. 654, 8vo. avec 10 planches coloriées, 4to. Par C. Billard 165
6. Traité Général d'Anatomie Comparée par J. F. Meckel, traduit de l'Allemand et augmenté de notes. Par MM. Riester et Alph. Sanson, Docteurs en Chirurgie, de la Faculté de Paris. Précédé d'une lettre de l'auteur. Vols. I. and II. 8vo. Paris, 1828 - - - - - *ib.*
7. Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London, Vol. XIV. London, 1828, pp. 463, with five plates - - - - - 166
8. The Morbid Anatomy of the Bowels, Liver, and Stomach, illustrated by a series of Plates from drawings after Nature, with explanatory letter-press, and a summary of the Symptoms of the Acute and Chronic Affections of the above-named Organs. By John Armstrong, M. D. Lecturer on the Principles and Practice of Physic, and Consulting Physician to

- the London Fever Hospital. Fasciculi, 1 and 2. Lithographic plates. London, 4to. 1828 - - - - - 177
9. Elements of Physics, or Natural Philosophy, General and Medical, explained independently of Technical Mathematics, and containing new disquisitions and practical suggestions. By Neil Arnott, M. D. of the Royal College of Physicians. Third edition. London, 1828, pp. 647, 8vo. 181
10. A short Treatise on the different methods of investigating the Diseases of the Chest, particularly by Percussion, and the Use of the Stethoscope. Translated from the French of M. Collin, by W. N. Ryland, M. D. Third edition; with additional Notes and Instructions, a plate of the Viscera of the Thorax, &c. London, 1828, pp. 86, 18mo.
- A rational exposition of the Physical signs of the Diseases of the Lungs and Pleura, illustrating their Pathology, and facilitating their Diagnosis. By Charles J. B. Williams, M. D. London, 1828, pp. 193, 8vo. With 2 plates - - - - - 182
11. A Manual of Modern Surgery, founded upon the Principles and Practice lately taught by Sir Astley Cooper, Bart. F. R. S. &c. &c. and Joseph Henry Green, Esq. F. R. S. &c. &c. Edited by Thomas Castle, Esq. F. L. S. Member of the Royal College of Surgeons, &c. London, 1828, pp. 337, 18mo. - - - - - 183

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

	PAGE.		PAGE.
1. On Different Kinds of Malformation of the Heart. By Dr. Gendrin - - - - -	184	Man. By Dr. S. Th. de Sæmmering - - - - -	186
2. Case of Imperforate Vagina. By M. Hervey de Chegoin - - -	185	5. On Valves in the Pulmonary Veins. By Professor Mayer - -	<i>ib.</i>
3. Apparent Hermaphroditism. By M. Hervey de Chegoin - - -	<i>ib.</i>	6. Microscopic Researches upon the intimate structure of Animal Tissues. By M. Raspail - -	<i>ib.</i>
4. Remarks on the Stomach of			

PHYSIOLOGY.

7. Case of Disease of the Brain, illustrating the Functions of the Fifth Pair of Nerves. By E. Stanley, Esq. - - - - -	187	9. On the Effects of the Division or Organic Lesion of the Fifth Pair of Nerves - - - - -	189
8. Case in which there was a diminution of Sensibility on one side, without loss of the power of Motion; and a loss of Muscular Power on the other side, without any diminution of Sensibility. By H. Ley, M. D. - - -	188	10. Vision after Destruction of the Optic Nerves. By M. Magendie - - - - -	190
		11. Five Children at a Birth. By Dr. Gaievsky - - - - -	<i>ib.</i>
		12. Case of Superfetation, the Uterus being naturally formed. By Dr. Farhenrost - - - -	<i>ib.</i>

	PAGE.		PAGE.
13. Case of Superfætation. By M. Castes - - -	191	of a Division of the Spinal Marrow, between the third and fourth Dorsal Vertebrae, in the Human Subject. By William Wallace, Esq. - - -	192
14. On the Connexion between Respiration and Circulation. By Dr. Defermon - - -	<i>ib.</i>	17. New Researches on the Immediate Agent of Vital Movements. By M. H. Dutrochet	194
15. On the Effects of Galvanism on the Nerves. By Weinhold	<i>ib.</i>		
16. Case illustrative of the Effects			

PATHOLOGY.

18. Complete Retention of Fæces, for Six Months. By Dr. Thune	195	27. Gangrene of the Lung terminating favourably. By M. Laurent - - -	201
19. Hydatids in the Female Breast resembling a Scirrhus Tumour	196	28. Instance of Obliteration of the Aorta opposite the Fourth Dorsal Vertebrae. By Professor Meckel - - -	<i>ib.</i>
20. Remarkable Predisposition to Hæmorrhage. By Dr. Schreyer	<i>ib.</i>	29. Case of Mollescence of the Coats of the Stomach. By M. Chomel - - -	202
21. Spasmodic Stricture of the Urethra from Mental Excitement. By Dr. Reimoneng -	<i>ib.</i>	30. Case of Tumour of the Cerebellum. By Joseph Houlton, Esq. - - -	203
22. Habitual Hæmorrhage from the Mammæ. By Dr. Jacobson	197	31. On Diseases of the Heart caused by Onanism. By Dr. Krimmer - - -	204
23. Action of the Uterus from Sympathy. By Dr. Pichon -	198	32. Case of Rupture of the Stomach, produced by Vomiting. By J. N. Weekes, Esq. -	205
24. Extraordinary Instance of Suppression and Retention of Urine. By Dr. Racum - - -	<i>ib.</i>		
25. Inflammation of the Placenta. By M. Brachet - - -	199		
26. On Morbid Softening of the Uterus. By S. G. Luroth, M. D.	<i>ib.</i>		

MATERIA MEDICA.

33. On Pyroligneous Acid. By M. Schultz - - -	206	36. On Oleum Ricini. By M. Langier - - -	207
34. On the Use in Fevers of the Sulphate of Quinine and of the Quinquina. By M. Vulpes -	<i>ib.</i>	37. On Phosphorus as a Caustic. By Dr. Paillard - - -	<i>ib.</i>
35. On a new Preparation of Balsam of Copaiba. By M. Dublane, Jr. - - -	206		

PRACTICE OF MEDICINE.

38. Dysentery cured by Nitrate of Soda. By M. Mayer -	207	44. On the Injurious Effects of Sulphuric Acid during Suckling. By Mr. Thomas Bevan	212
39. Treatment of Croup. By M. Jadelot - - -	<i>ib.</i>	45. Case of Anasarca, successfully Treated. By Dr. Juger -	<i>ib.</i>
40. Case of Gout. By M. Mestivier - - -	208	46. On Ptyalism. By Dr. Elliotson - - -	213
41. Case of Obstinate Hiccough, cured by the Actual Caутery. By M. Dupuytren - - -	209	47. Case of Purpura Hæmorrhagica treated by Venesection. By Dr. Latham - - -	<i>ib.</i>
42. On the Use of Mercury in Venereal Complaints. By S. D. Broughton, Esq. - - -	<i>ib.</i>	48. Chronic Ulcerations of the Tongue and Pharynx, cured by Iodine. By M. Magendie -	<i>ib.</i>
43. Treatment of Syphilis without Mercury. By M. Fricke	212		

OPHTHALMOLOGY.

49. Treatment of Spots on the Cornea. By M. Dupuytren -	214	Cornea for Idiopathic Paralysis of the Iris. By M. Serres -	215
50. On Foreign Bodies in the Puncta Lachrymalia. By M. Demours -	<i>ib.</i>	53. Case of Cataract with Amaurosis, Successfully Treated. By M. Demours -	216
51. Case of Affection of the Eye produced by Lightning. By Mr. Mayo -	215	54. Case of Fistula Lachrymalis cured by the Extraction of a Stony Concretion. By Dr. Kriemer -	<i>ib.</i>
52. On the Cauterization of the			

SURGERY.

55. Case of Extirpation of a Cancerous Excrescence from the Margin of the Anus. By Professor Lallemand -	216	63. Case of Gun-shot Wound of the Forehead, in which the Ball remained for a long period in the Skull. By Baron Larrey -	220
56. Case of Dislocation of the Metatarsus. By Mr. Sandwith -	<i>ib.</i>	64. On Strangulated Hernia -	<i>ib.</i>
57. Treatment of Phagedenic and Corroding Herpes. By M. Dupuytren -	217	65. On Lithotrity. By Dr. Civiale -	221
58. Case of Ligature on the Common Carotid Arteries. By Professor Langenbeck -	<i>ib.</i>	66. On Lithotrity -	<i>ib.</i>
59. On the Application of Plates of Lead to Wounds. By M. Reveille-Parise -	218	67. Case of Cancer of the Uterus Cured by Injections with Hydrocyanic Acid. By Dr. Bruni -	<i>ib.</i>
60. Case of Fracture into the Knee-joint, Successfully Treated -	<i>ib.</i>	68. Case of Abscess in the Cavity of the Meninges, cured by the Application of the Trephine. By M. Roux -	222
61. On Amputation of the Neck of the Uterus -	<i>ib.</i>	69. Case of Extirpation of a Cancerous Tumour from the Axilla. By Professor Lallemand -	<i>ib.</i>
62. Case of Amputation of half the Lower Jaw for Sarcoma, successfully performed. By M. Lisfranc -	219	70. On Amputation of the Thigh at the Hip-Joint. By M. Delpech -	223
		71. On Staphyloraphy. By M. Roux -	<i>ib.</i>

MIDWIFERY.

72. Case of Rupture of the Uterus, and of the Safe Delivery of the Woman by the Cæsarian Section. By Dr. Ludwig Frank -	223	74. On Pregnancy, with Cancer of the Cervix Uteri. By Dr. Laubreis -	224
73. Case of Expulsion of the Placenta, Four Months after Delivery -	224	75. Detachment of the Placenta by Injection of the Funis -	<i>ib.</i>

MEDICAL JURISPRUDENCE.

76. Case of Sulphuric Acid detected in the Fœtus of a Woman who poisoned herself with Sulphuric Acid -	225	mine the Question, whether, in cases of Poisoning, it is possible to discover the nature of the Poisonous Substance, even a long time after death. By MM. Orfila and Leseur -	226
77. Case of Poisoning by Sulphuric Acid. By Dr. Lebidois -	<i>ib.</i>		
78. Experiments serving to deter-			

CHEMISTRY.

79. Analysis of the White species of Ipccacuanha. By M. Vauquelin - - - - -	229	80. Analysis of a specimen of Cutaneous Perspiration. By J. Bos- tock, M. D. - - - - -	229
---	-----	---	-----

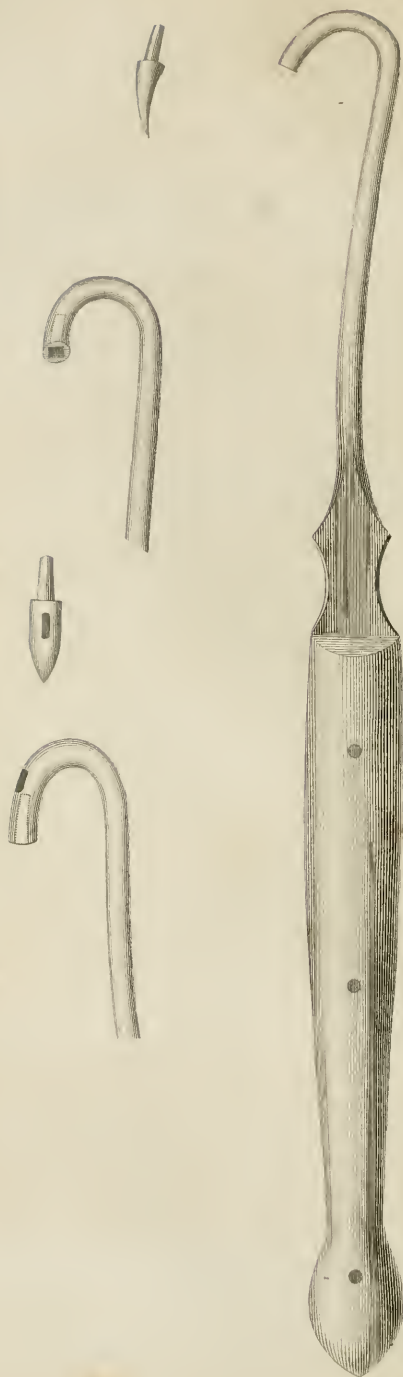
MISCELLANEOUS.

81. Seven Epileptic patients destroyed by excessive doses of the Hydrocyanic or Prussic Acid, prescribed by the physician of one of the principal hospitals in Paris. By Dr. A. N. Gendrin	230	84. Yellow Fever. By Dr. Cher- vin - - - - -	232
82. Encyclopedial Dictionary of the Medical Sciences - - -	231	85. Vaccination in France - - -	<i>ib.</i>
83. Institute for the Blind at Copenhagen - - - - -	<i>ib.</i>	86. Secondary Symptoms of Syphilis after various modes of treatment - - - - -	<i>ib.</i>
		87. Anatomical Collection at Breslau - - - - -	233
		88. Prize of Experimental Physiology - - - - -	<i>ib.</i>

AMERICAN INTELLIGENCE.

On Dengue. By Isaac Hays, M. D. &c. - - - - -	233	treated. By George W. Stedman, M. D. of St. Croix - - -	244
Description of an Instrument for Separating the Sternum. By W. E. Horner, M. D. - - -	242	On the Use of the warm Sand-bath in Tetanus. By George W. Stedman, M. D. of St. Croix	247
On the discharge of various matters from the Trachea. By J. R. Cox, M. D. - - - - -	243	A Case of Swelling of the Ankle-joint cured by Acupuncture. By Dr. John Davis, of Jackson, Tennessee - - - - -	<i>ib.</i>
On Prussiate of Iron in Intermittent Fevers. By William M. Fehnestock - - - - -	244	Jackson's American Practice of Medicine - - - - -	248
A Case of Tetanus, accompanied and followed by a severe Affection of the Muscles of the Right Arm and Shoulder, successfully		Hatin's Compendium of Operative Midwifery - - - - -	<i>ib.</i>
		Works Preparing for Publication	<i>ib.</i>





THE
AMERICAN JOURNAL
OF THE
MEDICAL SCIENCES.

ART. I. *On an Operation for the Cure of Natural Fissure of the Soft Palate.* By JOHN C. WARREN, M. D. Professor of Anatomy and Surgery in the Medical Institution of Harvard University, Boston.

SOME years ago I had occasion to perform an operation for remedying the natural fissure in the soft palate. At that time I understood the operation had been once done in Poland or Germany, and once by Professor Roux; but I sought in vain for details which might assist me in its performance. However, I executed it satisfactorily then, and have since repeated it; and therefore believed that an account of the manner in which it was effected might be useful, although I suppose it very possible that Professor Roux and others may have devised more ingenious methods.

As the operation in the first case succeeded, and was imitated in the others, I shall describe it in connexion with that case. The patient was a healthy young woman of sixteen. She was induced to apply for an operation, in consequence of the impracticability of distinctly articulating her words, so that her speech was offensive from its guttural tones, and not intelligible to those unaccustomed to it. The fissure began at the edge of the *os palati*, where the fleshy membrane was so thin as to be transparent. Its width was about three-quarters of an inch.

The patient being well supported and secured, a piece of wood an inch wide, a little curved at the end, with a handle to be held by an assistant, was placed between the molar teeth on one side, to keep the mouth open. A sharp-pointed curved bistoury was thrust through the top of the palate, above the angle of the fissure, and carried down on one edge of the fissure to its extremity. The same was done on the opposite side, thus cutting out a piece in the form of the letter

V, including about a line from each edge. Next a hook with an eye in its extremity, of the form represented, in Pl. I. armed with a triple thread of strong silk, was passed doubled into the mouth, through the fissure and behind the palate. The palate was pierced by it, at one-third of the length of the fissure from the upper angle of the wound, so as to include about three lines of the edge of the soft palate. The eye with the ligature being seen, the latter was seized by a common hook and drawn out. The eyed hook was then drawn back, turned behind the palate, and the other edge transfixed in a similar manner. A second and a third stitch were passed in the same manner, the third being as near as possible to the lower end of the fissure. Then seizing the upper ligature, I found no difficulty in tying it with my fingers, without the aid of a *serve-noeud*. The others were tied in the same manner, and the knots placed on one side of the wound, in order to prevent their pressing into the fissure. On drawing the third ligature I had the satisfaction to see the whole fissure closed.

The patient was exhausted by the operation, but soon revived. She passed twenty-four hours without speaking, or taking a drop of liquid in her mouth. For two days more she took only a little water. On the fourth day I ascertained that the edges of the wound had perfectly united, except at the lower extremity, where a slight separation took place, which afterwards united by means of an additional stitch. At the end of seven days I cut out the stitches, which were already loose. This patient left the hospital a day or two after. About two years subsequent to the operation I saw her, and found she swallowed perfectly, spoke very well, and was daily improving.

During the prevalence of the influenza of 1826, I operated with some reluctance on a lad of eleven years old, who had been brought a great distance for the purpose. A perfect union was effected: but at the end of three days he was seized with the influenza, and not understanding how to manage his cough, he tore open the adhesions, and I at once removed the stitches. This occurrence has led me to advise against the operation in children. The boy spoken of will undergo it a second time in the course of the next year.

The principal difficulty I met with in this operation, was in disengaging the ligature from the hook, after it had perforated the palate. In order to obviate this, I had hooks of various forms made afterwards by Weiss, of London; but none of them answered the purpose so well as the one here represented. I have thought that one with a moveable point, made to slip from a socket in the hook, so that the point and the ligature might be drawn out together, would lessen

this difficulty, and have had one constructed by Rose & Sellers, of which a drawing accompanies this paper. This has the same form as that I first used, but that the point is removeable.

If a needle without the moveable point is used, care must be taken in drawing out the ligature to draw on each side from the concavity of the hook. If attention is not paid to this, it may happen, that in drawing out the ligature on the first side, you entirely disengage it from the hook, which must then be armed anew. And again, when you draw out the ligature on the second side, the hook may be retained by the ligature, which cannot then be withdrawn, unless the stitch is drawn from the wound. This last would be a worse mistake than the other. Both of these accidents are avoided if the point be moveable. In this case the point and ligature are withdrawn together, by passing a common hook through the eye of the point. The point is to be armed anew with the opposite end of the ligature, and then passed on the second side of the fissure as on the first. There can be no danger of the point falling down the patient's throat, since it is secured by the ligature.

I have been very desirous to try this operation on the case of natural fissure of both soft and hard palate, such as often accompanies the hare-lip. In such a case it might be justifiable to try the operation on an infant; for if a union of the soft palate could be procured at an early period of life, it is quite probable that a disposition would be produced to fill up the bony fissure.

Whether in an adult any benefit could be derived from such an operation is doubtful. I shall embrace the first opportunity of making the trial.

ART. II. *Account of the Dengue, as it appeared in Charleston, S. C. during the Summer of 1828.* By S. HENRY DICKSON, M. D. Professor of the Institutes and Practice of Medicine in the Medical College of South Carolina.

ABOUT the end of June, 1828, a singular disease made its appearance in our city, through which it spread with unexampled rapidity, soon bringing under its influence the greater part of our population. The name by which I have designated it is a Spanish term, and was first affixed to it, as far as I can learn, in the island of Cuba. Its application is arbitrary; the various explanations offered respecting it being far-fetched and unsatisfactory. Our spring and summer

had been dry, pleasant, and temperate, and with the exception of whooping-cough, which prevailed through April and May, uncommonly healthy. Few attacks of ordinary endemic fever were met with, and these few were particularly manageable.

In the numerous cases of Dengue a very great variety of symptoms were presented, numerous modifications being occasioned by age, constitution, and other circumstances of the sufferers. The attack was rarely preceded by a formed chill. In general the earliest indication of seizure consisted in a painful affection of some part of the body, some limb, joint, or muscle. The wrist, the ankle, the back, the knee, nay even the extremities of the toes and fingers were thus selected. In one case a single finger became stiff and swollen some time before any other symptoms were felt. I saw a child eat a hearty breakfast, after complaining of pain in his foot—his hand became stiff next, then his knees; the disease developing itself thus gradually during a space of at least five hours before there was any regular febrile exacerbation as denoted by change in the pulse, breathing, heat of the surface, &c. In a very old woman all the fingers were at once attacked—they were bent and could not be straightened—and the intensity of pain was such as to occasion tears with loud sobs and screams. In a stout young man this pain in the very ends of the fingers was such that he cried bitterly. After these local pains had endured for a greater or less period, fever came on with its usual concomitants, headache, red eyes, full, abrupt, frequent pulse, hot, pungent, dry skin, pain in the back, restlessness. The fever did not remit, but was usually of short continuance; from eighteen to forty-eight hours, the average perhaps being about thirty-six. There was sometimes nausea and vomiting, though in a very large majority of cases in the early stage of the disease, the stomach was quiet and the tongue clean. It was more usual to find excessive determination to the head. I met with several instances in which delirium was among the first symptoms, coming on with the commencement, and going away at the subsidence of the febrile exacerbation. The skin I have said was hot and dry at first; it soon however became relaxed, and an abundant perspiration was thrown out, attended occasionally by a sort of rash or miliary eruption. This eruption appearing in the first stage of Dengue, was very various and by no means regular or characteristic. Children were often thus affected by it, and in several adults a thick crop of pimples was the first token of disorder. These usually disappeared in a day or two. On the subsidence of the febrile excitement, the extreme suffering from the local affections above enumerated was somewhat diminished for the most part, but they did not by

any means absolutely disappear, swelling, stiffness, and tenderness of the diseased parts remaining for many days. This state of things constituted a sort of deceptive interval between the first and second stages of this strange disease. In the mean while many patients believed themselves well, and resumed their ordinary occupations, but their sufferings were by no means ended. On the third or fourth day, there being no fever present, or a very obscure degree of it, the tongue would begin to be coated with a yellowish fur, and the stomach would exhibit much uneasiness and distress. The patient was low-spirited, impatient, fretful, and at night exceedingly restless. Many, and myself among them, regarded this as the most oppressive and insufferable stage of the attack. There was now not uncommonly nausea and vomiting, with great languor, lassitude, and debility. About the sixth day these symptoms were more or less relieved by the coming out of an abundant eruption, which I am disposed to regard as an essential or characteristic part of the disorder. It consisted in irregularly-shaped patches, red and elevated; the feet and hands swelling with a sense of thickening and numbness. There was much itching and burning of the skin, and at this time a second febrile paroxysm often came on, and the pains of the joints were in many aggravated to their former severity. I saw several cases in which the first stage of the disease, including both local pains and general fever, had passed over with very little notice or complaint, in which this second stage was very violent. Many became sensible on the third or fourth day of an inflammation and enlargement of the lymphatic glands, in the groin, axilla, on the neck, &c. and these continued swollen and painful for a length of time after convalescence was fairly established.

Very young children were liable to the disease, even from a few days after birth; some were supposed indeed to be born with it. The circumstances which induced the belief of their being thus affected were as follows—the skin was of a scarlet red, the tongue and lips smooth and fiery, the child could not bear to be disturbed, screaming violently if lifted from its place or if any of its limbs were moved. Below five years of age convulsions very commonly attended the invasion, and sometimes continued with great frequency throughout the whole of the attack.

Pregnant women were very liable to abortion, and a very remarkable number of instances of such miscarriage occurred among them. They were usually seized at the very commencement with violent pains in the back and loins, extending downwards into the thighs, ultimately occasioning the expulsion of the fœtus.

In very old persons, the disease at once occasioned great debility and excessive prostration. In one who had previously suffered much from rheumatism, there was a sort of paralytic affection of the limbs, which could merely be moved, but not to such an extent as to be used in any degree. In several elderly persons there was left behind an erysipelatous inflammation of one or both legs. In many, regular rheumatic inflammations of some joint or joints supervened during convalescence. In two young individuals, however, who had been martyrs to rheumatism, there was evident relief from the chronic stiffness and immobility of limbs and muscles, under which they had long laboured. In one the relief was absolute and entire, in the other partial and imperfect, yet notable in degree.

A sore mouth was among the symptoms of Dengue. It usually appeared before or about the time of the eruption. This was often attended with a free flow of the saliva, and a looseness, lividness, and sponginess of the gums, bearing a close resemblance to the circumstances of ptyalism. Ulcers formed in the mouth, which were very painful and irritable, and healed very slowly. In two patients there was hæmorrhage from the gums and fauces. The most ordinary consequences of Dengue were in the first instance the production of a permanent and remarkable degree of languor and feebleness, and beyond this, and somewhat less universally, a liability to very acute pain in some joint or muscle, attended perhaps by swelling and tenderness; this was variable, and shifted singularly from point to point; in the knees to-day, in the ancles to-morrow, and the wrists the next day. In the greater number those joints or parts which had been attacked in the first stage of the disease were specially thus tortured, but the pains were not by any means exclusively confined to them. When regular rheumatic inflammation of such joints came on, it endured with unconquerable tenacity. A great proportion of our population is even now complaining of acute sufferings on motion from this cause; in not a few it seems to increase rather than diminish with the lapse of time.

The prognosis in the malady now described was exceedingly favourable. Few died of the disease, whether managed by professional skill, or by domestic attention, or, (as was the fact in a very large proportion,) totally neglected. Yet there was a vast difference in the degrees of suffering undergone by different patients, and not a little in the duration of this suffering, and in the rapidity and perfectness of their convalescence. The very aged were most severely shaken; remaining for a long time, even when freed from every definite symptom of local disorder, whether internal or external, singularly infirm

and debilitated, and wasting gradually away with languor and emaciation. Indeed there are but very few persons above the age of sixty, who can as yet be pronounced to have recovered absolutely and entirely.

I have mentioned that some children were said to have been born with the disease actually formed upon them, as shown by pain on motion, febrile heat of skin, swelling of the smaller joints, &c. Others are authentically reported to have been taken ill of it when not more than three or four days old. The youngest patient which I myself attended was in the fifth week of its age. This was a marked case, the stages of the disease were well defined, and the eruption fairly characteristic. I need hardly observe that these young subjects were of course seriously attacked. Convulsions were with them an almost invariable symptom, and were often of extreme violence and frequency. In a little girl of about seven weeks old, they continued with scarcely any intermission, throughout the whole duration of the febrile paroxysm of the first stage, a space of thirty-six hours. The debility induced in this case was extreme. On the sixth day, about the time of the coming out of the eruption, the child fell into an alarming state of syncope, and continued for three weeks afterwards to be attacked with fainting fits of varying intensity and duration. It however recovered at last perfectly.

Corpulent persons suffered much from this fever, and convalesced slowly. It is not easy to say why this should be so, as many were previously in a state of perfectly good health. The intemperate paid in this as in every other form of disease, a heavy tax for their disgraceful indulgences. I saw several in whom it served to usher in formidable paroxysms of delirium tremens. Most practitioners anticipated that the invasion of Dengue would be especially injurious to pulmonic patients, yet as far as I could observe it seemed to have little influence upon these more than upon others, unless, perhaps, in the indirect effect of the production of a dangerous degree of general debility.

I saw but three deaths from this disease. One of these was of an elderly lady, who had been long infirm, and indeed a cripple, from chronic rheumatism, though nevertheless large and corpulent. On the day of the accession of fever she took an active cathartic, another on the second day; on the morning of the third she took an emetic, and in the afternoon repeated the cathartic. I was sent for on the fourth, when I found her much prostrated, incapable of moving, and breathing with some difficulty. She sunk gradually into death. The second was a fine child of about four months old; had been ill nearly two days when I

was desired to see it. It was in convulsions, and died in less than two hours from the time of my first visit. This little boy was remarkable for strength and robustness of appearance. The third fatal case to which I have reference was that of a little girl, two and a half years of age, much weakened by previous whooping-cough and verminous irritation. I have already observed that whooping-cough had been prevalent in the spring, and through the summer several children died of it. If far advanced at the time of the invasion of Dengue, this latter was productive of extreme suffering and high febrile excitement, followed occasionally, as in the above instance, by fatal prostration.

Treatment.—The violence of the early symptoms of this singular disease, seemed to call imperiously for the most prompt and active measures. The *lancet* was accordingly resorted to by many practitioners, who, without any hesitation ascribed to it a notable power in controlling the force of the attack. Others were content to deplete by cathartics, each employing his favourite among the widely-extended classes of remedies. The ordinary domestic practice, and a very large majority of the cases were treated without professional aid, consisted in the administration of a mild purgative, combined with or followed by a diaphoretic, as the solution of Epsom salts in infusion of seneka or serpentaria, or warm lemonade, until the bowels were freely opened; the patient was then covered up moderately warm, and hot drinks given from time to time, to produce and keep up free perspiration, the parts most pained being fomented with warm water or bathed in spirits. Such was the practice which I followed in a few of the first instances of the disease which fell under my care, but an early observation of the happy influence of opium over the extreme suffering of the sick, led me to depend on it ultimately in the very first instance, and the progress of the season gave me a very great number of opportunities of testing the propriety of the practice. Being called to a lady in the seventh month of pregnancy, menaced most seriously with premature labour, I prescribed one hundred and twenty drops of laudanum at once, to be repeated *pro re nata*; after three or four doses she fell asleep, and awoke almost entirely free from pain. Another within a few days of her time, was not only quieted in a similar manner, but absolutely relieved from all inconvenience by the same treatment; rising out of bed the second day, going through the eruption almost unconsciously, and in ten days after being favourably delivered of a fine healthy child. When summoned to a patient it became my custom to administer such a dose of opiate as seemed indicated by the severity of the attack, from a tea-spoonful of lauda-

num down to such a dose of this preparation, or of the tinct. opii camph. as was suited to age and other circumstances. If the determination was to the head, this was bathed with spirits, while the feet were immersed in hot water; if there was pain in the limbs, hot fomentations were applied. The dose of anodyne diaphoretic was repeated at proper intervals, from one to two hours, until the symptoms were relieved, usually alone, but not unfrequently in union with the spt. mindereri, a combination which seemed to me particularly applicable here. If the pains subsided on the subsidence of the febrile paroxysm, the patient was let alone, rest, low diet, and quiet being enjoined; if he went through the second stage, without a return of local pain or notable febrile excitement, he was still not interfered with; if there was such an exacerbation, (a very common circumstance, as before mentioned,) the same plan was again resorted to, and with similar advantage.

I am content, without making any attack upon the opinions or practice of my professional brethren, to claim merely an equal degree of success with that obtained by other modes of management. If the patients, subjected to the above mild remedial regimen, suffered no more at the time, and convalesced as rapidly as those who were more actively depleted, they must be considered as on the whole gainers. Yet I think I would be both safe and impartial in maintaining that the pains which they endured were sooner relieved—that they underwent less constitutional derangement—that they fell into a less degree of general debility—that they of consequence convalesced more rapidly—and that, although they did not obtain the privilege of absolute exemption from the rheumatic pains, stiffness and incapacity, which continued so long to haunt our community, that they yet were less subject than others to these inconveniences.

In this singular disorder, local pains often preceded by a considerable period, any symptom of fever or constitutional derangement. Nay, hours would often intervene, during which the patient would limp through his usual occupation or amusement, and even eat a hearty meal, before the development of general disorder. In certain cases, indeed, the whole of the first or rheumatic stage of the disease would be gone through in this obscure way, and the patient have no certainty of his being attacked until the characteristic eruption appeared. Of this I saw several instances. Now it would be hardly in accordance with ordinary views to contend that the pain here was of an inflammatory nature—they were either congestive or simply irritative. At this point then few or none would hesitate to employ the opiate, as in the cold stage of an intermittent. But even subsequently,

when fever was excited, this did not seem to me to contraindicate the opiate, as being the effect of a peculiar and specific form of local irritation, transient in duration, singularly disposed to shift from place to place, and happily determined by the nature of its proximate cause to external parts of no great vital importance, as the limbs and joints, and it was in this early stage precisely that I found the opiate most serviceable.

To the lancet my objection was that it was not indicated; that is, equal relief was attainable by the opiate, and I would always spare the vital fluid unless the abstraction of a portion of it is indispensable. If by any other means I can in short enough time relieve the system from morbid action excessively intense, I would not bleed; hence I prefer in ordinary inflammatory fever, cold affusions to venesection. Each reduces the pulse and force of circulation and inflammatory excitement; one can be repeated indefinitely, the other cannot; one leaves the vital power untouched, the other does not. No practitioner I presume will contend that the *absolute mass* of blood is, at least in the ordinary cases of fever, too great for the system, and that abstraction is needed on that ground. Cathartics occasioned a loss of much valuable time, and really effected little or nothing for the patient. It was difficult to obtain their full operation before the subsidence of the short febrile paroxysm; and even if this success was gained, the motion which they rendered necessary, seemed to add not a little to the discomfort of the sick. The emetic was the least objectionable, but was unnecessary in most instances. It determined well to the surface in the young and robust. I did not hesitate to employ the ipecacuanha when the patient had eaten heartily just before the accession of fever, and was nauseated or greatly oppressed at stomach. All physicians, I believe, resorted in the second stage freely to the opiate, whether alone or with some other diaphoretic. But the golden opportunity was past; the main object of our art, prevention of evil, was left unaccomplished; the storm had swept by, and its consequences were remediable with special difficulty. It is no easy matter to account for the extreme prostration of muscular and vital power, so often left by a paroxysm so transient, and in some instances so mild; yet this constituted a part of the particular history of the disease under consideration. Nor was the contest even now finished; we had to deal with an eruptive fever, and if the energies of the system were too much impaired, the centrifugal determination which was to proceed from or to give relief to the gastric disorder would be slow and imperfect. At this stage many were tempted by the great uneasiness and oppression at stomach to offer purgatives of various kinds, mercurial, saline and resinous; but as far as I know with the same

result—an increase of the internal irritation and a postponement of the period of cutaneous inflammation; a protraction necessarily of the duration of the disease. In such instances too, if I did not deceive myself, there was an aggravation of the local pains, and an increased liability to their becoming fixed and inflammatory.

This miserable stage of restlessness and oppression was soonest ended in those who remained at rest in a recumbent posture, confining themselves to the lightest diet, and avoiding exposure to changes of temperature. In a very great number of instances I had recourse, with the best effect, to the highest order of diffusible stimulants, in addition to the opiate—camphor, vol. alk. brandy and ether, with sinapisms to the extremities. This course was especially to be pursued in those who were old and infirm, and who had weakened themselves and given rise to internal determinations by the previous employment of cathartics.

Nature.—The Dengue is a contagious eruptive fever. That it is contagious is readily proved by the fact that its transmission can be traced in a very great number of cases from one subject to another. It has been said that children were affirmed to have been born with it; at any rate they were often affected with it at such early periods of life, that we can hardly suppose them to have been liable to any epidemic influences in the atmosphere. Yet it cannot be denied that like whooping-cough and small-pox, and other contagious affections, it became epidemic, and thus invaded our population with an unexampled rapidity.

Very soon after its appearance among us, an old patient of mine, who had not for more than two years past left his chamber, was seized with it. It may be interesting to those who have attended to the discussions concerning the latent period of fever, to record the following fact.

A merchant from a portion of our middle country coming to town near the end of July on business, was seized with fever on the *third* day after his arrival. It proved to be a regular attack of Dengue. He had been exposed, as far as I could learn, to no source of contagion, having seen no one ill of the disease; and it was surely an uncommonly rapid development of the influence, whether of epidemic distemperature of the air or of any other of the causes of specific forms of fever. I would maintain it to be an eruptive fever. It is true that cases occurred in which no eruption was thrown out, but this peculiarity was observable in their history. The patient was liable to a second, third, and indeed indefinite number of returns of the disease,

or relapses as they were called, while such as were properly covered with the eruption about the sixth day were protected from any future attack. To this rule there was no exception in my practice, as I may confidently assert after particular attention to the matter. I have indeed heard of second attacks when the eruption had been completed, but on closer inquiry I have been satisfied that I could account for the mistake here. I have mentioned that there was in a great number of instances, and especially among children, an eruption on the first, second, and third days, resembling prickly heat or the efflorescence in scarlatina. This was an irregular circumstance, and seemed to have no influence on the future progress of the case. If after this, which subsided early, the secondary stage, consisting in peculiar gastric disorder, rarely if ever unattended by more or less fever, was not formed in such decided way as to terminate in the characteristic eruption above described, the patient was not safe from a return of the disease; the constitution had not undergone the proper modifying and protecting changes which were effected by a full development of all the stages of morbid action which belong to the malady.

The origin of this distressing affection is not known. The newspapers informed us of its existence in the islands of the West Indies some months before it reached us. We received it from Havanna; the captain of a vessel trading to that port having introduced it, communicating it first to his immediate family. Since this time we have seen the news of its invasion of New Orleans and Vera Cruz. I regard it as highly probable that it will extend itself all over the world, as no circumstance has yet appeared to offer any perceptible barrier to its spreading.

It has been much disputed among us whether the Dengue is properly a new disease, or is to be considered as a modification of any of our known forms of disease. RUSH has described, under the title of bilious remittent, a form of fever which appeared in Philadelphia in the summer and autumn of the year 1780, more closely resembling it than any other whose history I have met with. It may be perhaps interesting to note the prominent points of resemblance and dissimilarity.

Rush's fever made its first appearance in July and August. It affected all ages and both sexes. Practitioners of physic would seem, as with us, to have been specially liable. "No other febrile disease was observed during its prevalence in the city." It came on sometimes with rigor, seldom with a chilly fit, and often without any sen-

sation of cold. Many instances occurred in which it was introduced by a delirium. The pains which accompanied it were exquisitely severe in the head, back, and limbs. In some these pains were so acute in their backs and hips that they could not lie in bed. In others they affected the neck and arms so as to produce in one instance a difficulty of moving the fingers of the righthand. From these circumstances the disease was sometimes believed to be a rheumatism, but its more general name among all classes of people was the break-bone fever. A nausea universally, and in some instances a vomiting attended. A screatus or constant spitting attended in many instances through the whole disease. The bowels were in most cases regular. The tongue was generally moist and of a yellow hue. The skin was generally moist, especially when the disease terminated on the third or fourth day. The pulse quick and full, but never hard. Little or no thirst attended. A *rash* often appeared on the third and fourth days, which proved favourable. The rash was accompanied by a burning in the palms of the hands and soles of the feet. Many people at this time who were not confined to bed, and some who had no fever, had an efflorescence on their skins. Convalescence from this disease was slow and attended with many extraordinary symptoms, which rendered patients the subjects of medical attention for some time after the termination of the disease. A bitter taste in the mouth and a yellow tongue continued for near a week. Most who recovered complained of nausea and a total want of appetite. A weakness in the knees was universal. Faintness, especially upon sitting up, followed this fever. An uncommon dejection of spirits was the most remarkable symptom of convalescence. A young lady proposed to him to change the name of the disease, and to call it in that stage, instead of the break-bone, the break-heart fever. A remark to the same purpose, and almost in the same words, was made to me, in her convalescence from Dengue, by a Spanish woman, who had never heard of Rush or his writings.

The mildness of the necessary treatment is also a strong point. Rush gave gentle emetics, laxatives, and diaphoretics, declaring that out of several hundred patients whom he visited, he did not before the 27th of September, when the weather was becoming cool, see one that required blood-letting. Diluent drinks and confinement to bed he recommended as favouring the appearance of the rash, and the solution of the disease by perspiration. Lastly, the strong encomium which he passes upon the usefulness of opium, is an additional circumstance of similitude between the two affections. "Its salutary effects in procuring sweat and a remission of the fever led me,"

he says, "to prescribe it afterwards in almost every case, and always with the happiest effects. Those physicians enjoy but little pleasure in practicing physic, who know not how much of the pain and anguish of fevers of a certain kind may be lessened by the judicious use of opium." I will be pardoned for adding that even Rush himself would have been delighted to find that it was unnecessary at least in the majority of cases to wait for what he styles "the necessary evacuations;" and that this relief or diminution of pain and anguish might safely be accorded to the patient, as soon as the disease commenced, and thus many hours of severe suffering shortened and past away.*

Let us mark next the points of dissimilarity, or those circumstances in which his bilious remittent differs from our eruptive fever. He tells us there were generally remissions in this fever every morning, and sometimes in the evening. The exacerbations were more severe every other day, and sometimes two exacerbations were often observed in one day. When the fever did not terminate on the third or fourth day, it frequently ran on to the eleventh, fourteenth, and even twentieth days, assuming in its progress, according to its duration, the usual symptoms of the typhus gravior, or mitior of CULLEN. He does not mention any suspicion of its contagious nature, and does not seem to regard the eruption as a very prominent or essential part of the disease. Indeed, he does not describe the cutaneous disorder at all, merely terming it a rash, though he speaks of it as a general and favourable symptom. After all, I think it may be fairly questioned whether the disease itself may not have been modified in some measure by the treatment pursued and believed to have been indicated by its supposed identity in type with the ordinary fevers of the season, and whether his description of it may not have been rendered vague, and in a degree therefore unfaithful, by this view of it, which Rush seems unhesitatingly to have taken.

Charleston, August 30th, 1828.

* I am persuaded that the profession has much to learn upon the subject of the admissibility of opium in the practice in fevers generally. One of the most intelligent and experienced physicians whom I have ever known, told me in advanced life, that he was every year making some addition to his list of conditions, allowing the use of opium in diseases, and I may declare with truth, that the most satisfactory and agreeable of my experiments in the practice of the healing art have consisted in the employment of this divine remedy—many of these having been made in states of the system, and under circumstances which dogmatists of all sects have taught to offer positive contraindications to its exhibition.

ART. III. *Reports of Cases treated in the Baltimore Alms-house Infirmary.* By THOMAS H. WRIGHT, M. D. Physician to the Institution.

THE following communications are simply hospital reports, or a plain record of such cases and results, as seemed of sufficient interest to deserve attention, or were calculated to illustrate some principle, or establish some fact of useful application.

CASE I. *Paralysis. Subluxation and Fracture of one of the Cervical Vertebrae.*—Priscilla Hilton was admitted into the Baltimore Alms-house, November 14th, 1827, with nearly total paralysis of both superior and inferior extremities. The history obtained of the case was as follows:—A week previous to admission, the patient had fallen down a long flight of stairs, striking, as was supposed, on the back of her neck. The accident was not immediately discovered, and the young woman lay for some time insensible. When found by the family, her consciousness had returned, but she was unable to rise, or to use any of her limbs. From that time the paralysis continued, as when admitted in the Alms-house, nearly total.

In connexion with the general paralysis existing when this patient was admitted, there was a tumid tense state of the abdomen, resembling tympanitis. The bowels were torpid, not having acted since the injury, but from medicinal excitement; the flow of urine free, but altogether involuntary; pulse slow and soft, heat natural, respiration unembarrassed, senses perfect, no pain, but tenderness of the abdomen. On examining the neck of the patient, there was some degree of swelling, and great sensibility to pressure. The head was turned and fixed so as to direct the face somewhat to the left side, and all attempts to restore its natural position gave pain, and was resisted by the patient. She preferred being placed on the right side. *Diagnosis.* Subluxation, and probably fracture of the fifth or sixth cervical vertebra.

After this patient had been a day or two in the infirmary, she was observed to sleep naturally for some hours at a time, but was liable to be aroused by spasmodic attacks, and was once or twice affected by convulsive muscular action so violent as to throw her out of bed. She had little appetite, and it was found that efforts to vomit generally ensued a few hours after eating; the egesta commonly green and foetid. On the third day after her admission the tendency to vomiting became greater; every thing swallowed was soon rejected, and stercoreous matter in considerable quantity became at last mingled

with other substances thrown off by the stomach. The attempts to procure intestinal evacuations by the usual cathartics, with enemata, having failed, Croton oil was ordered, in combination with tinct. rhei and ol. ricini. R. Ol. Croton. gutt. ij.—Tinct. rhei. ℥iv.—Ol. ricini, ℥j. ft. mist.—℥ij. om. hora donec alvus movetur sumendus. The first dose suppressed the vomiting; the second procured two or three sufficient alvine movements. The vomiting did not again occur, and the tympanitic state of the abdomen relaxed very much. But the patient manifested an increased state of prostration, and notwithstanding the liberal use of cordials, gradually sunk, and expired on the following day, the fourth after admission. The mental functions continued free from disorder to the last moment.

A careful dissection disclosed the following circumstances. The entire cervical, and part of the dorsal spine, was cautiously exposed, and the vertebræ freed from muscular matter. It was then obvious that there existed partial dislocation, with fracture, at the junction of the fifth and sixth cervical vertebræ. The inferior anterior margin of the fifth cervical vertebra projected four or five lines in advance of the margin and body of the sixth vertebra. The ligament of the left transverse process of the fifth vertebra was torn up, the articular surface exposed, and the process itself dislocated, and partially separated from the body of the vertebra by fracture. The whole cervical column, above the point of injury, was turned or twisted from right to left, so as to present the range or line of its spinous processes, considerably to the right of the line of the same processes in the column below. Hence the turn of the head and left aspect of the face, noticed as existing when the patient was admitted. The theca spinalis was surrounded, (the vertebral canal filled,) some distance above and below the point of injury, with semifluid grumous blood. The three lower cervical and first dorsal nerves at their exit between the vertebræ were covered and deeply coloured by the same bloody effusion, and the ligament around the injured articulation stained and blackened by the same matter.

The history of the preceding case, with the facts disclosed by dissection, serves to illustrate some of the doctrines of the nervous functions predicated on physiological anatomy, and concurs with the pathological data inculcated by eminent modern surgeons, in reference to injuries of the spinal column, more especially in regard to injuries of the cervical spine, as determined in their nature and effects by the particular point and location of such injury. In the case above recited, the lesion occurred between the fifth and sixth vertebræ, and voluntary motion was almost wholly extinguished in all the muscles

supplied by nerves communicating with the spinal marrow below the point of injury. But respiration was not seriously impaired, indeed not sensibly embarrassed, because the nerves holding dominion over the more important respiratory apparatus, were not directly involved in the injury, deriving their origin above the seat of lesion. Hence the protraction of life for many days, although the accident was fatal in its nature, chiefly perhaps from its influence upon the gastric and alimentary functions.

There were some peculiarities in the present instance, or a few circumstances not analogous to the phenomena described as usually attendant on cases of similar injury. Some distinguished surgeons mention retention of urine as among the consequences of injury of the dorsal and cervical spine. The opposite state existed in the subject of the preceding account; the urine flowed continually and involuntarily. This incontinence has been found to occur frequently in females under circumstances which usually produce retention of urine in males, a result probably caused by the difference in the relative structure and connexions of the urethra. Surgeons also, (Mr. COOPER and others,) represent involuntary intestinal evacuations as attendant on injuries of the spinal cord. Obstinate constipation, scarcely to be overcome by the most powerful purgatives, attended every period of the case above reported. There existed also in this case more faculty of sensation in the parts below the injury, than is common, according to surgical authorities, in such lesions. The sensibility of some parts, the trunk especially, was preternaturally great, instead of the torpor and insensibility generally described.

Writers on injuries involving the spinal marrow, speak of a considerable degree of tympanitic affection of the abdomen resulting from such violation, attributing the effect to torpor of the gastro-enteric functions, from defective nervous excitement. Probably, irritation through the ganglionic system of nerves, may be concerned in producing the effect in question. It has been already noticed that the subject of the foregoing history was apparently tympanitic, the abdomen being prominent and tense. The tension lessened a good deal after the full operation of a cathartic, but the enlargement of the abdomen was not sensibly diminished. The continuance of the latter state was explained by dissection. While cutting out the cervical with part of the dorsal spine, it was observed that when the cavity of the thorax was penetrated, a thin serous fluid flowed out of the chest in great quantity, far more than is ever naturally present in that cavity, or accumulated by mere infiltration or transudation after death. On opening the abdomen afterwards, it was found filled with water, con-

taining as much fluid as is usually present in the mature state of abdominal dropsy.

Here then was hydrothorax and ascites apparently produced by injury of the cervical spine, and so rapidly produced as to have been matured in a few days. The effusion would appear to have been strictly the consequence of the spinal injury, because the subject seemed to have been, and reported herself to have been in good health at the time of the accident. How shall this phenomenon be solved. Is it to be considered as the result of the violent shock communicated to the system, embarrassing the natural functions, and determined more particularly on the capillary series of circulation and transmission, or shall it be regarded as the consequence of irritation suddenly devolved on the serous tissues of the abdomen and thorax, analogous to that sub-inflammatory diathesis in those textures, which commonly gives occasion to hydropic effusion?

The abdominal viscera in this subject were generally in a natural state, with the following exception. The coats of the bladder were very much thickened, particularly where the peritoneum is reflected over the fundus vesicæ. Besides the morbid density of the coats and peritoneal covering of the bladder, numerous patches of quite black matter, of considerable surface and thickness, were deposited upon both the bladder and its peritoneal covering; those deposits were of various extent, and appeared of recent formation. Many spots or patches of the same melanose substance, were observed on the colon and mesentery.

CASE II. *Rheumatica-Acuta, ulceration, caries, with spontaneous dislocation.*—John Callender, aged fifteen, was admitted into the Baltimore Alms-house, February 3d, 1828, reported to have been sick two weeks. The state of this patient when brought to the Alms-house was as follows. Acute fever, synochus type—pulse 130 to 140—general emaciation—inflammation, pain and swelling of the right thigh, with contraction of the right leg, and incapacity to stand or walk. The swelling of the thigh was greatest about the middle portion of the limb, extending toward the hip, but causing no sensible enlargement around the articulation. The swelling of the thigh was diffused without tension or signs of effusion, and no apparent tendency to supuration; the temperature of the limb very little raised. Pain in the part was constant, and became extremely acute on slight pressure or movement of the limb. The seat of most severe pain and greatest sensibility was on the internal face of the thigh, over or a little below the insertion of the psoas and iliacus muscles. The preceding statement of the case was obtained from the senior pupil of the

house, by whom the patient was taken in charge, and attended for two weeks previous to the case falling under my notice, having been detained from the institution for that period by sickness. The case was registered inflammatory rheumatism, and under treatment as such, when I resumed my attendance on the wards.

The general features of this case, and the history of the previous state, seemed so decidedly analogous to the usual display of inflammatory rheumatism, that I did not hesitate, after examining the symptoms, and inquiring the manner and circumstances of attack, and previous state of health, to admit the propriety of the classification to which the case was referred, and of the course of treatment pursued. The pain, soreness, and swelling of the thigh continued as when admitted; the sensibility of the part extreme, yet without tension, or other signs of phlegmonoid affection. The leg was much contracted and flexed on the thigh, incapable of extension, and in that bent state the knee lay resting on the opposite limb, from which the patient could not bear it elevated or removed without great pain or complaint, the point of greatest pain still on the interior superior space of the thigh. There was neither obvious intumescence nor peculiar sensibility about the hip; the integument was tense over the lateral and posterior aspect of the joint, which seemed simply a consequence of the position of the thigh and leg across the opposite limb, the patient reclining altogether on the left side. The feverish action had continued without sensible abatement, from the time of admission, the pulse ranging from 130 to 140, contracted, yet firm and somewhat tense; the temperature of the whole body sensibly greater than natural, skin generally dry and harsh, with sometimes partial perspiration of the mucous character, or what is generally termed clammy.

The treatment of the case was conducted on the indications furnished by the constitutional and local circumstances, and corresponded mainly with the temperate antiphlogistic course so much insisted on by SCUDAMORE, and long employed by the profession, in the second stage of inflammatory rheumatism. Blood-letting was now omitted, as incompatible with the exhausted state of the patient and unsuited to the period and character of such excitement, which, after becoming fully established, is almost uniformly unsusceptible of prompt control or suppression by direct or active means of depletion. The least exciting aperient, diaphoretic, and tranquillizing agents were employed in turn according to circumstances, and fomentations applied to the affected limb. Oil, sulphate of magnesia, or the Seidlitz compound, were generally directed as aperients, and a solution

of sub-carbonate of potash, charged with spirit of nitre, wine of ipecacuanha, (or a minute portion of tartar emetic,) and oxymel of colchicum, exhibited at intervals as a diaphoretic, with Dover's powder, (sometimes combined with calomel,) or the black drop, to obviate pain and vigilance at night. The local treatment was chiefly fomentation with a tepid solution of muriate of ammonia, combined with a portion of spirit of camphor, and occasionally a vesicatory was laid about the hip and limb, a little removed from the immediate seat of swelling and sensibility. As a counter agent of fever, the combination of camphor, nitrate of potash, and submuriatic was found most efficient, and the patient was kept on this course generally for about two weeks, when the feverishness abated so far that medicines were withheld, except as occasionally demanded to regulate the excretions.

By the fifth week after admission into the infirmary, the pain and swelling of the limb, together with the constitutional disorder, had subsided so much that the patient voluntarily left his bed every day, and by the support of crutches walked about the ward. The leg was still contracted, but much more susceptible of voluntary extension, than during the state of pain and fever. The patient's appetite and strength improved, and being an active, sprightly youth, he exerted himself a good deal to bring the limb into use, extending his movements in good weather from the hospital, to the yard appropriated for exercise to convalescents. He had been put, after subsidence of fever, upon use of infusion of cinchona with bitters, and supplied with a stimulant embrocation, which he was directed to employ with diligent friction, about the hip and knee, continuing such exercise as could be taken without pain or fatigue.

The second week after Callender had been discharged from clinical regimen, (between the seventh and eighth after entering the infirmary,) he attracted my attention while passing his bed, on which he had lain down to rest for the moment, by inquiring if something could not be done for the more complete extension of his leg, which remained somewhat contracted. I threw back the bed cover to observe the state of the leg, and was immediately struck with apprehension that there existed an evil in the case, which I had never before suspected; the remarkable relation of the right knee to the left, in the position the young man lay, at once excited my fears that there was serious mischief at the hip. The lad was on his back, with both limbs drawn up, and the patella of the right presented three inches short of the left. Observing that the pelvis was depressed on the left side, I caused that obliquity to be corrected, and finding that the right knee

did not descend to the left by two inches, I expressed to the class, the attending pupils, my conviction that the head of the femur had lost the acetabulum. Passing round the bed to examine the hip, and removing all dress from the part, dislocation was manifest, almost without the proof of touch. The ball of the femur was defined through the thin and tense integument, and could be readily embraced with the point of the fingers. It rested on the dorsum ilii, near the border of the ischiatic notch, and could be raised, or made to move readily to pressure upward and downward.

So unexpected a result, in a case of (supposed) rheumatic arthritis, led me to doubt the accuracy of the diagnosis, in the first instance. It was unsupported by precedent within my knowledge, that rheumatism should destroy the natural relations of a bone so sustained against the influence of muscular contraction, the only power which rheumatism seems competent to employ towards the work of disarticulation. The solid defences of the joint must have been broken down by a process, certainly not common, and perhaps never properly belonging to rheumatic degeneration of structure. The true condition of the parts was readily ascertained, by causing extension of the limb to be made, while the head of the bone was lifted, (by drawing the shaft outwards,) from the dorsum ilii. When the head descended to the level of the socket, and rotation was made, a sensible and even audible crepitation was distinguished. The ligaments and cup of the acetabulum were opened by ulceration and caries, and space had thus been made for the escape of the head of the femur.

It became a question of interest, to learn, if possible, the primary occasion of this sort of mischief, and particular inquiries were instituted anew into the circumstances immediately preceding or first attending the pain, swelling, and disability of the part, with the probable exciting cause of the first demonstration of the local disease. It was minutely investigated whether the hip had been hurt by a fall, by jumping, a strain, blow, &c. on the part. Those questions had been made in a general manner before, and were answered then as now, in the negative. No accident had occurred, nor any injury been sustained, of which the patient was conscious, or which he conjectured to have any influence in producing the affection of the part. His own account in detail was as follows. He had been well and active up to the day he was attacked. On that day he had been left in charge of his master's house, (he was apprenticed,) and was sitting by the stove, attending to the children of the family, when in an instant he was seized by pain, within, or inside the thigh, near the groin, so

acute as to cause him to cry out. He attempted to rise and walk, but found himself unable to stand or move the affected limb; he called the servants to his assistance, and was carried up stairs to bed; fever and swelling of the thigh came on that night, and he remained as described when admitted into the Alms-house. One fact only could be learned, having probable connexion with the onset of disease, within the hip-joint. He mentioned now, for the first time, that two days preceding the attack of pain in the top of the thigh, he had been sent some miles, on an errand requiring despatch, and had rode very hard.

It would perhaps seem to argue inattention to the state of the hip in this case, not to have discovered the nature and extent of an evil so remarkable as disarticulation, until two or three weeks after the mischief had been done. I by no means pretend to shelter myself against the presumption of erroneous diagnosis, or what amounts to the same thing, of an incautious and too general estimate of the circumstances of the case.* But while the patient lay in bed under treatment, (which had been the case two weeks before I saw him,) handling the limb gave exquisite pain, and was on that account very much abstained from. The character and seat of pain and swelling, and the entonic form of fever, seemed to indicate the distinct predominance of rheumatic irritation, and on those prominent features of the case the treatment was regulated. As it regards the single circumstance of the dislocation remaining for a time unsuspected or undiscovered, it may be sufficient to remark, that during treatment of the case, there was neither swelling nor effusion around the hip, those being located in the upper internal portion of the thigh, the affected limb rested on the other, without any manifest disproportion of length, except what position would cause, and it was only after the patient began to move about, and bear a little on the affected limb—in fact, after he had ceased to require or receive particular attention, that the head of the bone left the line of the acetabulum, and moved up on the back of the ileum.

Callender is now, (July,) walking about freely on crutches. The

* It is sufficiently plain on a deliberate retrospect of all the circumstances, that there was enough in the aggregate of symptoms duly weighed, to have suggested some suspicion of the probability or the danger of serious articular disease. But it is always easier to trace the relation of signs and their causes at the close of a case than during the periods of its active progress and undecided result. In diseases of equivocal character and blended symptoms, it must often happen that instructed experience can alone supply a guide to correct discrimination.

head of the bone is very distinctly defined on the dorsum ilii, and has suffered no sensible waste. The ulcerous action seems to have ceased soon after the period of disarticulation; there is no pain or soreness about the hip, and considerable weight can be borne on the affected side without inconvenience. The state of the limb, indeed, is very much that of chronic dislocation of the femur upward and backward, in which the prominent evils are shortening of the member, inversion, and limited range of movement. The leg remains partially contracted. His general health is very much improved; hectic irritation has passed away altogether, and the lad has acquired flesh and strength. He thinks himself able to dispense with crutches, and walk by support of a stick, if inequality in the length of the limbs was obviated by a suitable shoe. But he is not yet permitted to incur the risk of irritation, or of weakening the defence forming around the head of the bone, by pressure on the affected limb in locomotion. The limb has shortened three inches.

Is this case to be regarded as one of those rare instances of rheumatic arthritis, of which some respectable writers admit the possibility; namely, rheumatic inflammation lighted up in the articular textures, and from peculiar intensity, running on to disorganization and waste of both the soft and solid structure of the joint? Mr. BENJAMIN BELL, GOOD, and others, recognize a species of rheumatic arthrocase terminating in suppuration, ulceration, and caries. SCUDAMORE also adverts to the occasional, though very unfrequent occurrence of suppuration in rheumatic phlegmasia. The kind and seat of pain, the early contraction of the leg, and the very distinct affection of the fibrous textures of the thigh in the case of Callender, seem explicitly to indicate rheumatic complication; but probably in this case, and in all instances denominated rheumatic white-swelling, the rheumatic symptoms are mere coincidences, not essentials, in the disease; rheumatism and struma often go hand in hand. If we are to regard the case in question as a true coxarius, suddenly developed from irritation, and involving in speedy destruction, the articular cartilages, the spongy fabric of the acetabulum, the synovial membrane, and capsular ligaments; it differs in many respects from the usual display of hip disease. Scrofulous degeneration of joints is commonly a slow process, varied no doubt in this particular, by the nature of the exciting cause, and the local disease is usually associated with other evidences of strumous diathesis, as affections of the spinal column or glandular system. None such were present in the case of Callender, and the general health had been good, yet the group of physical cha-

racters were of that cast, (tall, spare conformation, light hair and eyes, and lively countenance,) among which struma is often latent. Again may we look to simple or common inflammation of the articular cartilages, produced by contusion from the hard ride, for the origin of the disease, and the consequences that ensued? Mr. BRODIE found that inflammation of cartilages terminated readily in ulceration, which, if extensive, necessarily caused caries of the subjacent bone, with ulceration of the synovial membrane and capsule, and such ulceration and caries were often extensive, without evidence of suppuration. But Mr. Brodie does not design to separate those forms of articular disease, from the connexion they are supposed, perhaps correctly, by Mr. HUNTER and others, to hold with a strumous constitutional taint. I throw out the suggestion merely whether inflammation of cartilages from severe irritation, may go on to ulceration and caries in a habit untouched by struma, or where nothing exists to lay predisposition. Articular ulceration seems to be sometimes partial, and to cease spontaneously, or stop at a point short of serious destruction. A subject was examined last winter, of full stout frame, when upon dividing the capsular ligament of the right hip, the head of the femur rose from the acetabulum, and it was discovered that there was no round ligament. The fossa of implantation was filled up by fibrous matter, and no vestige of the ligament appeared. There were indications of former inflammation, and probably partial ulceration, in the colour and thinness of the central part of the acetabular cartilage.

Some of the circumstances in Callender's case seem worthy of particular notice. First, the fact that the articulation was rapidly breaking up, without any obvious state of the soft parts immediately investing the joint as might indicate the character of injury going on within. There was no discoverable inflammation or effusion of the skin, or under the fascia, over or around the joints; on the contrary, the muscular covering of the articulation was exceedingly attenuated, and the skin contracted very closely about the part. Second. The short time in which the articulation was destroyed, and the bone dislocated: it was five weeks from the day of attack when the pain ceased, and fever subsided; a relief from suffering, owing probably to the giving way about that time of all the connexions which had kept up tension and irritation. Third. That the head of the femur had wasted so little as to preserve its round form, while the deep socket had melted down sufficient to permit it, the head of the bone, to move out through the opening. Fourth. The total absence of symptomatic pain of the knee, so generally characteristic of acute coxalgia.

CASE III. *Arthrosia Atonica*.—Elizabeth Henry, aged thirty-five, admitted into the Baltimore Alms-house 1st of May, 1828. She is of middle size, and well-formed, with black hair and eyes, and fair complexion; says she had led an active, temperate life, enjoyed good health, and borne children. When admitted, she could not stand without support, and was unable to walk, from pain in the upper half of the right thigh, and weakness of that limb. The day after admission she had no fever or head-ache, pulse soft, slow, and equal; skin cool, no cough, tongue clean, appetite good, bowels regular, sleep natural, except from occasional spasms of the thigh. Thus the circulating, cerebral, respiratory, digestive, and nervous systems, wholly out of fault. The complaint of the patient was referred by herself entirely to the thigh, and a point in the front middle portion of the limb indicated as the seat of predominant sensibility. The patient stated that she was attacked suddenly, fourteen days before her admission into the Alms-house, by acute pain of the thigh, and from the moment of attack had been unable to walk.

The thigh now exhibited no mark of disease. There was no heat, inflammation, tension, or enlargement; the skin and muscles soft and pliable, and the part not tender to the touch, except pressed toward the centre of the limb, when there was shrinking and complaint. The hip was neither swelled, nor super-sensitive, even to firm pressure, and the whole limb compared with the opposite one, betrayed no visible mark of difference. On my pronouncing the apparent absence of local disease, the patient said the pain was in the bone. I confess frankly that I regarded this poor woman as either ignorantly or wilfully exaggerating a common affair of chronic rheumatism.

The patient had taken some medicine, and the part had been freely blistered, (without relief,) before her admission into the Alms-house. A gum pill, which has produced in the institution much relief from chronic rheumatism, composed of guaiacum, camphor, and hyosciamus, was directed for the patient, with anodyne embrocation of the part. I saw this case every other day for a fortnight, during which time its circumstances did not sensibly alter. The patient continued without general indisposition, preserving a quiet pulse, cool skin, clean tongue, and good appetite, the limb retaining the appearance and state before described: she expressed herself relieved from pain by the pills, and asked to have them renewed when out. On the 16th of May she requested me to look again at her limb, stating that it had been severely painful the night before, and that it was now shorter than the other. The thigh was examined, and exhibited its usual appearance; on comparing the lower extremities, the position of the right leg was

natural, but the bottom of the foot presented on a line with the internal malleolus of the other leg; that is, the right limb appeared about two inches shorter than the left. After every attention to the equipoise of the pelvis, and the full, but easy, extension of the limb, the right foot rested an inch and a half higher than its fellow. The hip was next carefully examined. The dorsum ilii was free, and the head of the femur could not be felt. These circumstances, and the natural position of the limb, established that there was no dislocation. But there might be something as bad, and on gently extending, raising, and rotating the limb, a bold, rough crepitation was as distinctly felt as in free recent fracture. The head of the femur, or the acetabulum, or both, were gone, and the limb had been drawn up by the muscles in its natural axis.

She is at present, (four weeks after destruction of the joint,) able to sit up, and even walks a little by support of one crutch. Her appearance betrays no mark of impaired health, and there is no longer pain or soreness in any part of the limb. In her case, too, the only inconvenience is shortening, and disability of movement; the injured limb is two inches short, and can be advanced or retracted by its own muscles only a very limited space. The aspect, or presentation of the limb is natural; in standing, sitting, or lying, there is neither inversion nor eversion of the foot. It may be noticed here that at one period, soon after the articulating surfaces were destroyed, the limb was found to have lost its proper attitude, and to lay upon the other in a state of complete inversion. It was easily restored to its natural aspect, and by restricting the patient to a position on her back for some time, it did not again decline from its proper axis.

This is a melancholy case, and suggests a lesson of modesty of useful import; namely, to distrust our sagacity in forming a judgment of obscure affections. To myself at least, two such cases occurring nearly together, in neither of which the terrible tendency of the disease was fully apprehended, until revealed by its consummation, plainly admonish the necessity of close, careful, and circumstantial investigation in such cases, as well as the propriety of proceeding on the principle of guarding against the worst that might happen, even though the danger of that result is not plainly apparent. I cannot charge myself with neglect or slight of duty in this case; the countenance, general health of the patient, and the external state of the parts deceived me, and were calculated to deceive.* But the thigh

* It is a state of things in fact, not easy of detection, and even if discovered, perhaps still less susceptible of safe conduct. There is little reason to conclude

and hip were frequently and carefully examined. Not a trace of inflammation, swelling, or soreness to the touch existed in the soft parts, either at first or subsequently. The poor woman herself was right: she constantly declared that the disease was in the bone, and this is not the first time a patient's sensations have been more faithful than the tact of the profession.

All I learned further than has been already told, was that the pain commenced with a "sudden dart," in the front of the thigh, two inches below the trochanter, while the woman was standing in market. On the first days of pain, a few vesications formed on the surface of the thigh, about the seat of the pain, but these soon subsided and left the part free from any after appearance of disease. The patient complained for the first time on the 16th of May, (the day after the joint broke up,) of pain at the top of the knee, which continued severe for many days.

The total absence of constitutional concern in a work of local destruction of so serious a character, is an unusual phenomenon, fitted to mask the nature of the disease, and divert from calculation on an issue of which there existed so few and equivocal admonitions. When this woman was admitted into the institution, pain of the right thigh not constant, nor very acute, with loss of motive power in the limb, constituted the only marks of disease, nay, the only evidence of decline from the most perfect state of health. After entering the infirmary the case did not at any time present even an ephemeral feverish tumult; the skin was always cool, and pulse temperate. The pain, or rather uneasiness of the part, though seldom wholly absent, was never distressing in the day, and was readily averted or mitigated by an anodyne at night. The ultimate destruction of the joint, though attended by extreme distress of feeling, produced scarcely a sensible febrile movement, and the faint disturbance of circulation which attended the process in question ceased very soon, and left the patient with a pulse calm and quiet, as in health.

The condition of the limb itself is not less remarkable than the constitutional circumstances just adverted to. It has not been, and is not even now, (7th of June,) at all wasted or altered in form. Its state as to size, temperature, and all circumstances, shortening alone excepted, is perfectly natural, and there is no longer pain of the part during a state of strict repose. This woman now gets out of bed, (to make necessary evacuations,) and accomplishes the task by

that after admission into the infirmary, the final consequence could have been averted by any mode of management.

lifting the thigh and leg off the bed with both her hands. She says that when she is up resting on the sound limb, the affected leg and thigh turn uniformly of a very dark, or in her language, black colour.

A gentleman reading medicine with me, communicated last winter a specimen of morbid anatomy he had met with, analogous to the preceding case. The bottom of the socket had wasted by ulceration sufficiently to permit the ball of the femur and neck of the bone to pass up into the pelvis, the great trochanter jutting against the brim of the acetabulum. The head of the femur was considerably reduced in size, and a species of ligamentous connexion bound the neck and trochanter to the sides and edge of the socket.

Baltimore, July, 1828.

ART. IV. *Case of Axillary Aneurism removed by the application of a Ligature to the Subclavian Artery.* By Dr. EDWARD W. WELLS, Physician and Surgeon in Maracaybo. Communicated by FELIX PASCALIS, M. D. of New York.

I AM emboldened to offer the following case to the public from a conviction that the detail of every successful surgical operation of magnitude is interesting, as throwing additional light on practical points of importance, and strengthening facts which have been made the foundation of useful rules. The successful termination of the present case may tend to corroborate four maxims advanced by distinguished surgeons, and which were borne in mind during the operation.

1st. That in cases of axillary aneurism the operation ought not to be deferred till the tumour acquire such a size as to elevate the clavicle considerably.

2d. That the best ligature is that which is the smallest, compatible with a degree of strength necessary for constricting the artery firmly.

3d. That it is of the utmost importance to maintain the limb in as absolute a state of rest as is enjoined in cases of fractured bone.

4th. That the age of sixty years is not a reason for declining the performance of the operation, provided there be nothing otherwise unfavourable in the constitution, circumstances, or situation of the patient.

It is useful in the early stages of the disease, to apply moderate pressure in such a manner as to operate only upon the tumour, without compressing the adjacent and surrounding parts, which in the

present case was easily effected by the means employed, with no other inconvenience than a slight degree of numbness and œdema in the fingers, the necessary consequence of the pressure affecting the subclavian vein, and some of the nerves in the vicinity of the artery. That in the present case this compression had the effect of promoting the enlargement of the anastomosing vessels, may I think be inferred, from the fact of the circulation in the arterial ramifications of the limb being apparently so little affected by the ligature of the artery, as manifested by the absence of that increased temperature of the part after the operation, which is usually considered indicative of the augmented action in the suddenly dilated branches. I would not, however, by any means delay the operation, when the tumour should have increased so as to elevate the clavicle to the degree which occurred in the case under consideration, as it is this position of the bone that forms the only difficulty in applying the ligature to the artery. It may be further remarked that so much relief from pain was afforded by the pressure, that on my ordering the patient to leave it off for a short time, on account of the swelling of the fingers, he begged to be allowed to continue it, as the slight inconvenience of the tumefaction was more than counterbalanced by the comfort which the compression afforded.

In performing this operation, I was struck with the importance of taking time in operating among parts of which a rough handling or imprudent injury might have been attended with dangerous, not to say fatal consequences; and I preferred retaining the patient longer on the table, which scarcely augmented his suffering, to risking his safety by precipitation.

It cannot be doubted that the less the parts are separated, and the smaller is the extent of the wound, the more probability there is of reunion by the first intention. For this reason the practice appears reprehensible which some writers recommend, of making two incisions meeting at an angle, and of dividing the omo-hyoideus, and cutting the anterior scalenus muscle. That portion of the artery which it is necessary to expose for the purpose of applying the ligature, may easily be reached by one incision of less than three inches in extent, and any further division of parts can be attended with no useful purpose, and augments the subsequent danger of suppuration, hæmorrhage, &c.

The following is the mode of operating that I would employ in ordinary cases:—

The patient should be laid with the affected shoulder *projecting a little over the edge of the table*, the arm drawn down as much as possi-

ble, and the elbow backwards, and steadily retained in that position by a good assistant, by which means the artery will be placed in the most favourable relative position, the platysma myoides will be put upon the stretch, and the dissection materially facilitated. Then let an incision be made through the integuments, beginning immediately over the acromial edge of the clavicular origin of the sterno-cleido-mastoid muscle, and a little more than half an inch above the clavicle, and continued for about two inches and a half in length towards the shoulder and terminating about a quarter of an inch above the clavicle. Next let the platysma myoides be divided *carefully*, in order not to touch the veins, which ought not to be cut if they do not prove a considerable impediment to passing the needle under the artery, as their division would render necessary additional ligatures, a source of irritation which of course it is expedient to avoid. If, however, the jugular vein be so situated as to prove a great source of difficulty, let it be included in two ligatures, composed each of a single thread of silk, and divided in the interspace. For the reasons just mentioned, the hæmorrhage from the small vessels of the skin should rather be suppressed by compression with the finger, and the dissection of the cellular substance conducted slowly, and as far as possible with the handle of the scalpel in preference to the edge. By this cautious mode of proceeding several small arteries may often be avoided, the bleeding from which might prove troublesome by obscuring the parts, and perhaps render it necessary to apply ligatures. There would also be less danger of dividing any nerve of magnitude, an accident which might possibly be attended with inconvenience. The ligature which I would prefer is a strong silk sewing thread, doubled and twisted and waxed, so as to render the knot less liable to loosen. In operating in the following case some variation from the above method was made, but the most important circumstances pointed out above were attended to; and perhaps without falling into the error of *post hoc, ergo propter hoc*, its success may be considered some argument in its favour.

CASE.—Hermenegildo Gonzales, aged sixty-one years, of small stature, spare habit, and quiet, patient disposition, one of the poorer class of farmers, residing a few miles from the city of Maracaybo, began in the month of October last to feel pain in the course of the scaleni muscles of the right side, which he could not assign to any evident cause, unless it might have been occasioned by violent exercise on horseback. The pain was much augmented on moving the arm, and shortly after its appearance a tumour became visible in the axilla, which, when he applied to me in the month of November, was

an evident axillary aneurism. The tumour pulsated strongly in the axilla and under the clavicle, and was of about the dimensions of a small orange. The brachial artery was also enlarged to about the size of the little finger for about an inch or more in extent, and about three inches below the axilla. The pulse and temperature of both arms were equal. Considerable pain was felt when the arm was perfectly at rest, and it was much increased by the least exercise. The patient is the father of three healthy children, has always enjoyed good health, and was not labouring at the time he applied to me under any disorder except the tumour, and did not experience pain or inconvenience in any other part of his body. Owing to his spare habit of body, the subclavian artery was unusually distinct to the feel in both shoulders, and by moderate pressure on that of the affected side, the pulse in the aneurism, as well as at the wrist, was suppressed.

Having always the operation in view, I explained to the patient the nature of his situation, and as a preparatory measure, and with the object before mentioned, advised pressure to be made to the dilated portion of the artery by means of balls of soft leather stuffed with moss, to be applied in the axilla, and to the tumour under the clavicle, and retained in their position by a bandage.

April 8th.—The tumour was considerably increased in size, and more painful. The application of the balls afforded relief to the pain, but occasioned a slight degree of numbness and œdema in the fingers. The temperature and pulse were the same in both arms. The superficial veins in the neighbourhood of the aneurism were enlarged, apparently from the pressure of the tumour on the subclavian vein. When both scapulæ were lowered as much as possible by drawing down the arms, the acromial end of the right clavicle was about an inch higher than its fellow. A considerable portion of the pectoral muscles was protruded by the tumour, which at the upper part, immediately under the clavicle, was nearly of a *hemispherical* figure, and measured three inches in diameter. That in the axilla was considerably smaller.

April 12th.—At eight o'clock, A. M. I proceeded to the operation, assisted by Dr. JOHN IRWIN, Surgeon Major in the Colombian army, charged with the care of the military hospitals of this place, and Mr. DAVID T. LANMAN, formerly of New York. The temperature of the right hand 94°, left hand 95°, pulse 86, and equal in both radial arteries. The patient was laid on the table with the affected shoulder projecting a little over the edge. As the skin was very lax, I apprehended that it would be difficult to divide it immediately over the place where I intended to dissect down to the artery; I therefore or-

dered the shoulder to be elevated, and drawing down the relaxed integuments, made my incision immediately upon the clavicle, beginning it over the acromial edge of the clavicular origin of the sternocleido mastoid muscle, and continuing it along the bone for less than three inches in extent. I then, without altering the position of the shoulder, cut carefully through the platysma myoides, which was unusually thin and delicate, but as the incision was made upon the bone, I ran no risk of wounding the jugular vein, which crossed the line of the incision diagonally, and nearly in the middle, as soon as the shoulder was depressed, in order to continue the dissection down to the artery. The arm and scapula being drawn down as much as possible by the assistants, I dissected cautiously, sometimes using the handle, sometimes the edge of the scalpel, until I laid bare the artery where it emerges from the anterior scalenus muscle. This dissection was tedious and somewhat difficult, the subclavian vein being large, and so elevated by the tumour as to cover the situation of the artery. A considerable nervous branch lay above and somewhat behind the artery, and another rather smaller, crossed it obliquely just as it left the scalenus. The artery was large but apparently healthy. The situation of the jugular vein was found to impede the dissection so materially that it was included with two ligatures composed each of a single thread of sewing-silk, and divided between them. The hæmorrhage from the small vessels required no ligature, and not more than an ounce of blood was lost. The artery being laid bare, I made a slight incision with the cutting spatula through the cellular sheath on each side of the vessel, and passed under it Dr. PARRISH'S needle, armed with a small ligature composed of two fine strong silk sewing threads twisted together and waxed. In this part of the operation, no little difficulty was experienced from the deep situation of the artery, although aided by the above excellent needle; and I am convinced that without a contrivance of the kind it would have been absolutely impossible to pass the ligature. The thread being under the artery, the assistants, as well as myself, examined the vessel, and remained satisfied that it alone was included in the ligature. I then tied it firmly, in doing which the patient experienced little or no pain. One end of the thread was cut off close to the artery. The pulsation immediately ceased in the whole arm, and the tumour under the clavicle shrunk considerably. The wound was dressed with adhesive strips, and the ligatures disposed of in the usual way. Fifteen minutes after the patient was placed in the bed, the temperature of both arms was the same as before the operation. The pulse in the left radial artery was 88, full, and regular. He complained of no

particular uneasiness, except a very slight numbness in the fingers of the right hand. Ordered him to confine his diet to broth and arrow-root, and enjoined the strictest attention to remaining perfectly at rest, and not to rise from his bed on any account.

Twelve o'clock, pulse 84, full, and regular; temperature of the right hand 99°, left hand 100°. He says he has experienced slight pain in the wound and arm, but that it is better. His countenance is cheerful. Seven o'clock, P. M. pulse 76, and regular; temperature of the affected side 97°, left side 98°; some pain in the hand and arm.

13th.—Twelve o'clock, pulse 83; temperature of both arms 99°; pain in the arm relieved; numbness slight.

14th.—Twelve o'clock, pulse 80, and somewhat weaker and irregular; temperature of both arms 96°. He complains of numbness in the arm. Ordered a more nourishing diet, and as the bowels are somewhat confined, laxative enemata.

15th.—Nine o'clock, A. M. pulse 80, and regular; temperature of both arms 96°; numbness diminished. He complains of pain in the stomach; bowels not opened by the enemata. Ordered syrup rhei $\mathfrak{z}\text{j}$. —pulv. rhei $\mathfrak{z}\text{j}$. M.

16th.—Nine o'clock, A. M. Medicine produced a copious evacuation; pain in the stomach was removed. I dressed the wound, which appeared to be nearly united, and gave no pain; pulse 86; temperature of both arms 96°. The superficial veins are much diminished in size.

17th.—Nine o'clock, pulse 80; temperature of both arms 96°; wound nearly all united, and looks well. The tumour is very hard, and neither it nor the wound gives any pain. He complains of occasional slight pain in the arm; the bowels have not been opened; repeat the medicine.

On the 30th, the upper ligature of the jugular vein came away, and the next day the other ligature of the same vessel, and on the 3d of June, that of the artery. A small sinus remained in the course of the ligatures which was cured by injections of sulphate of zinc, and of solutions of nitrate of silver; and on the 14th of June was perfectly healed. The pain and numbness had entirely left the arm, which was every day regaining its motion. The tumour under the clavicle had almost disappeared, and that in the axilla was reduced to the size of a walnut, and very hard. The patient called to see me previously to returning to the country to pursue his usual avocations, overwhelming me with a profusion of grateful expressions; and I had the happiness of feeling that as an humble agent, I had been the means

of successfully employing one of the triumphant expedients of modern surgery, to save an unfortunate fellow-creature from the jaws of the grave, to restore a husband to his despairing wife, and a father to his afflicted children. My gratification will be increased, should the detail of this case, by adding something to the book of experience, aid in promoting similar results.

Maracaybo, June 23d, 1828.

ART. V. *On the Topography and Diseases of Western Pennsylvania.*

By L. CALLAGHAN, Member of the Faculty of Medicine, and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

WESTERN Pennsylvania stretches from 39° 40' to 42° 20' north latitude, and from 78° to 81° west longitude. It is bounded by the Alleghany mountains on the east, by the state of Ohio on the west, by that of Virginia on the south, and New York on the north, having that great inland sea, Lake Erie, on its north-western boundary. This portion of Pennsylvania may in geographical language be called a table land; low water mark at the city of Pittsburg is one hundred and fifty-two feet above Lake Erie, seven hundred and twenty-seven feet above the Hudson at Albany, and seven hundred and fifty-six feet above the Atlantic ocean at Cape May; the apex of the highest ranges of hills are about twelve hundred feet above tide water level in the Chesapeake.

The entire surface of the country is made up of a succession of hills with intervening valleys, the aspect of descent lying towards the south-west. The land abounds in a rich bituminous coal and limestone; the luxuriance of the timber is the best evidence of the natural fertility of the soil; the vallies are equally remote from marsh, and the hills from sterility. The country is well watered; the Alleghany, Conemaugh, Kiskeminitas, and Monongahela are its principal rivers; the Alleghany and Monongahela uniting at the city of Pittsburg to form the majestic Ohio. In the investigation of the atmospherical temperature of western Pennsylvania, perhaps the climatic thermometer of VOLNEY is the best standard that can be used, from which four general cases will determine the difference of climate on any two given places on our globe. 1. Difference of latitude. 2. Difference of elevation. 3. Exposure to particular winds. 4. Proximity to, or remoteness from, large bodies of water.

Judging from latitude alone, we could neither account for the tropical heat of summer, nor for the intensity of the cold in winter, experienced in western Pennsylvania; nor much less could we account for the magnitude and suddenness of the changes, situated as we are under similar parallels of latitude with the city of Madrid in Spain, the islands of Minorca and Sardinia in the Mediterranean, the cities of Rome and Naples in Italy, and that of Constantinople in Turkey. Hence we must look, in the investigation of our climate, to our elevated situation; our exposure to the north, north-west, and westerly winds, to our being protected by mountains more than two thousand feet high, from the east; and south-east to our being remote from the warm air of the gulf stream, or the general equalizing effects of the waters of the ocean on the atmosphere; to which may be added the large portion of our land which is yet under forest. From this combination of causes the climate may be accounted for in the most satisfactory manner.

It is to be regretted that we are not as yet in possession of any regular series of thermometrical observations from which the alternations of temperature might be exactly known. This is a subject well worthy the attention of the practitioner of medicine, and comes immediately within his province, as without an accurate investigation of the effects of climate on the human body it is impossible to arrive at any thing like scientific conclusions with regard to disease. However, we may appeal to the experience of every person of observation, resident in western Pennsylvania, for the high temperature of our summer heat and the piercing cold of winter, with the suddenness and magnitude of the changes throughout the year. The past winter indeed, forms an exception in point of mildness scarcely to be equalled within the remembrance of the oldest inhabitants. We have had comparatively speaking but little frost, and scarcely any snow, but we have had the most complete succession of continued rains from October to March.

During the months of July and August it is not uncommon for the thermometer of Fahrenheit to rise to upwards of 96° in the shade. This high temperature however is not durable for any number of days or even hours of the same day, and can only exist during a southerly wind. The wind veering about to the north or particularly the north-west, will lower the thermometer 10, 20, 30, or 40° in the course of a few hours. During the 27th, 28th, and 29th of January, 1821, the thermometer stood at from 13 to 14° below zero of Fahrenheit's thermometer; this may be taken as a specimen of our most intense cold, but in almost every winter the mercury sinks to or below

zero; this can only last during the continuance of a northerly or north-westerly wind, particularly the latter; on a change of wind to the southward, the temperature will rise 10, 20, or 30° in the course of twenty-four hours. In the latter end of March, 1828, the thermometer rose for a few days above 60° of Fahrenheit; in the beginning of April it was down below the freezing point. Such is our vicissitude of climate that it is impossible to calculate on any invariable range of temperature for any given time during any season of the year. In winter the north-westerly winds bring us the most intense degrees of cold; this may be accounted for, from the immense regions covered for the greater part of the year with ice or snow lying north-west of us; those immense inland seas, Erie, Huron, Michigan and Superior, which are frozen up for several months in the year, and to our being exposed to the full and unmitigated sweep of this wind, blowing over those regions, without the intervention of mountain or the equalizing effect of the waters of the ocean. On the contrary the south wind coming to us from the Gulf of Mexico and the valley of the Mississippi, blowing over land for nearly two thousand miles, brings us a very increased degree of heat, and accounts satisfactorily for the high temperature of our summers.

The prevailing diseases in summer and autumn are affections of the brain, stomach, and bowels, particularly the latter. In winter and spring we have diseases of the chest and lungs; the latter is increasing among the sedentary population of our towns with fearful strides. As we are happily free from marsh miasmata, we are strangers to those forms of intermittents which are endemial east, west, north, and south of us. Our fevers are generally of the continued type, accompanied with the inflammatory diathesis, the synochus and synocha of CULLEN, and characterized by deranged action of the brain and bowels.

We seldom meet with any of the low forms of typhus mitior, and are strangers for the most part to typhus gravior. Hence we have no contagious fevers.

In summer and autumn our agricultural population are not unfrequently visited with dysentery. This is not so common among the inhabitants of the towns; which may be accounted for from the exposure of the agriculturists to the increased heat of summer and autumn. It is in most cases either during harvest, or immediately after it, that this disease breaks forth.

During harvest the farmer is exposed to the most violent and laborious exercise under a burning sun, which cannot fail to induce a high degree of excitement in the system. The body is bathed with perspiration, the clothes are saturated with it. The thin linen

pantaloon, the shirt, &c. the usual summer dress of the farmer, becomes as wet in the case of many persons as if they had been drawn through water. If he stops to rest for a little, that part of his dress not in immediate contact with his body becomes cooled down so rapidly, that if it is allowed to touch the skin it induces a sensation which can only be compared to the application of ice to the body under other circumstances. Here is a fertile source of disease. His thirst is intolerable; he must drink large quantities of fluid; nature calls for a reduction of the febrile excitement of the system; the increased perspiration must be supplied; the usual drink is ardent spirits with water. To enable him to undergo his increased labour, his food is rendered more luxurious, and for the most part more indigestible. He swallows large and frequently repeated quantities of solid animal food. His night of rest is short, and his day of labour long. He is frequently found out in his light dress, with the system yet hot with the excitement of the day, under the dews of the evening. He is out in the morning with the rising of the sun, while the fields are still wet with the dews of the previous night. Here are other fertile sources of disease. The fever which is attendant on this disease is of a highly inflammatory type; the bowels and peritoneum partake most severely of the diseased action. It is not usually fatal under any well regulated mode of treatment. It is not contagious, although its spreading over entire sections of adjoining country, induces a belief among the people that it is so. But this arises from all having been exposed less or more, to the original exciting causes of the affection, and not from the powers of contagion.

Cholera infantum is a disease frequent in the towns during the summer months, and more especially in confined and badly ventilated apartments. In these places its fatality is considerable.

It is usual in professional intercourse to hear a great deal about bilious diseases; we have bilious fevers, bilious colics, bilious head-aches, and even bilious pleurisies, without end. Does a patient present himself with a furred tongue, he is bilious; has he constipation of the bowels, he is bilious; has he impaired digestion, he is bilious; and so on, until at length biliary derangement has become, in the vocabulary of these gentlemen, the *primum mobile* in most cases of disease. Were this simply confined to an error in nosological discrimination, it would be comparatively harmless, but it leads to the most mischievous errors in practice. That we have in reality no such biliary derangement, it is only necessary to appeal to our climate. It is physically impossible that it should exist under our variable atmosphere and in our ele-

vated situation. It is only in marshy countries and under a more southern sun, that general hepatic derangement entwines itself to any extent with the prevailing diseases, as in the more southern and low-lying sections of the United States or the peninsula of India.

Here we should have post mortem examinations to appeal to, but our medical industry presents us only with meagre data in this respect. Had this method of investigation been resorted to, it is matter of impossibility that we could long have laboured under this biliary delusion. The prepossessions of the people may be pleaded in extenuation, but this affords only a slender cover; the minds of the people here, as well as in the sea-board cities, might and would be entirely under the guidance of their medical attendants in this respect, were they to set the importance of it in every case plainly before them.

We shall now consider the propriety of using mercury in these diseases.

From the well-known effects of mercury on the human constitution,* it evidently behoves the judicious practitioner to weigh well the propriety of having recourse to so powerful an agent. Previous to its administration, it should be ascertained that it is not only applicable, but absolutely necessary for the particular case of disease; nothing short of this can justify its use in a single instance. That there are cases of disease in Western Pennsylvania demanding the exhibition of this mineral, I am well aware from experience, but that it is necessary, or even applicable to the general mass of summer or autumnal complaints incident to the country, and as modified by the climate, is neither warranted by facts or just induction; as a proof of this, it is only necessary to refer to a list of those diseases with their remote and proximate effects on the constitution. And first, of cholera infantum, (the cholera of adults is but of rare occurrence,) dissection, it is true, proves an accumulation of bile in the stomach and duodenum, relaxation and distention of the biliary ducts; but this is only the effect, not the cause, of the disease. Vomiting and purging constitutes the characteristic symptoms of the complaint, from which we may infer a high degree of irritability of the stomach and bowels, occasioned for the most part by increased atmospherical temperature. Can the accumulation of bile in the stomach or duodenum, or the increased irritability of the stomach and bowels indicate the use of mercury? Most assuredly not. The use of this mineral would not

* See Hunter, Swediaur, Pearson, &c.

only increase the accumulation of bile, but the irritability also. Hence, instead of being beneficial, it would accumulate all the evil consequences of the disease.

Post mortem examination in cases of dysentery exhibit increased vascular action of the peritoneum and intestinal canal. Can this indicate the use of mercury? We know that it is a powerful stimulant, and would be more likely to increase than allay the morbid action. I am well aware of the partiality for the use of the submur. hydr.; it is supposed that we are in possession of nothing else that will procure sufficient alvine evacuations, but scruple doses of calomel; no practice can be more egregiously wrong. It is an axiom in the treatment of enteritis, that the mildest laxatives should alone be used; this holds equally true in the dysentery of Western Pennsylvania. Let the inflammatory action first be reduced by the use of the lancet, warm fomentations, diaphoretics, blisters, anodyne and emollient enemas, with rest and abstinence, and the mildest aperients will be sufficient for evacuating the bowels. What benefit any judicious pathologist can expect from the use of mercury in phthisis pulmonalis, in such a climate as this, it must be difficult to conceive; a medicine that is avowedly a stimulant, increases the action of the heart and arteries, induces febrile excitement, rendering the system more irritable, and consequently leaving the emaciated frame less able to withstand atmospherical vicissitudes, which is one of the great exciting causes of the disease. In our fevers, it is equally uncalled for; and if pushed, the length of affecting the salivary glands, pernicious. Indeed, its beneficial effects in the fevers of tropical climates, where the liver is one of the principal seats of the disease, has been of much injury to us. Practitioners reasoning from the slight degree of analogy existing between our summer seasons and that of intertropical climates, have been led to suppose that hepatic derangement formed a characteristic feature of our fevers also. But this opinion only rests on false induction in the absence of post mortem examination. With us, it is the brain, nervous system, stomach, and duodenum, which are the strong holds of the disease, the liver being healthy. It is a common practice among the people, and sanctioned by our practice, to have recourse to calomel, and that in large doses, in almost every simple obstruction of the bowels in the summer and autumn. This is a fertile source of evil in a climate so variable as this, and under which the most adamant constitution must ultimately fall. In cases of persons confined to sedentary employments, a costive state of the bowels during the heat of summer and au-

tum is very prevalent, particularly among females; and the best practice is to obviate this tendency by keeping up a gentle and continued action of the intestinal canal with the mildest aperients, and a proper attention to regimen. The system is debilitated and rendered irritable by the increased atmospherical temperature to which it is exposed, and the sure way to render it still more irritable and debilitated is to enter on a course of scruple doses of the submuriatis hydrargyri. The great mass of empirical nostrums vended in the shops under the appellation of anti-bilious pills, &c. &c. are highly objectionable on this account, as they all owe their active qualities to the quantity of calomel they contain. Anti-bilious seems to be the watch-word under which those deleterious nostrums are daily foisted on society; the people imagine that most of their complaints arise from biliary derangement; hence a prescription that professes to be anti-bilious or an enemy to the bile, is a sovereign remedy for all their ills. While on this part of our subject, I would beg leave to allude to an article in the first number of this journal, by Dr. JACKSON, containing some very just and well-merited strictures on the practice of physic as applied to England, so far as having recourse to powerful pharmaceutical agents, is concerned in slight cases of indisposition, and of that combination of the trade in drugs, with the duties of the physician. These observations apply with peculiar force to the practice of medicine as conducted in Western Pennsylvania.

I most heartily concur with this intelligent practitioner, that a complaint trivial in itself, may very readily be converted into one of more serious magnitude by this over-pharmaceutical practice, and by none more readily than the calomelizing plan. The patient, supplied with a dozen calomel pills, or half a dozen calomel powders, by his physician not being conscious of any thing very serious being connected with his case, pursues his usual avocations, and through inadvertency falls into some slight exposure, when the remedy becomes infinitely worse than the disease. It is true, the practitioner cautioned him perhaps to be aware of this, but why use a remedy fraught with such hazard in cases where it is not imperiously demanded, in a country where the generality of its diseases do not require it, and in a climate highly unfavourable to its use. In the case of delicate females, it is peculiarly destructive from their natural irritability of fibre, rendered still more so by their sedentary life, the habits and modes imposed by the structure of that society to which they must conform, with the cares and duties incident to their sex. All conspire to render them easy and almost certain victims to mercurial

action. Only witness the effects of this mineral in the more robust, and judge of its ravages in the more tender. In our being full and lusty, the gait light and elastic, the muscular action firm, the countenance clear if not ruddy, the gums sound, the teeth unimpaired, and the mind strong. Only witness the contrast after having been calomelized for a season or two, in compliance with our biliary hypothesis.

The air languid, the muscular action paralyzed, the limbs feeble, the hand tremulous, the countenance sallow, the gums spongy, the teeth gone, the breath fetid, the appetite impaired, the organ of digestion injured, the constitution ten, or perhaps twenty years in advance of the natural age of the individual, the mind, that greatest ornament of feminine excellence, a wreck, with the entire frame like a living barometer, affected by every change of weather. Such is an outline of the evils entailed on society by our predilection for the use of mercury.

ART. VI. *On Paruria Erratica, or Uroplania*. By SALMON AUGUSTUS ARNOLD, M. D. of Providence, Rhode Island.

THE disease of erratic urine, though it has seldom been admitted into nosological arrangement, was accurately described as early as the sixteenth century. It is termed by most authors uroplania, from the Greek ουρον πλανητης erraticus. Dr. GOOD has given it a place in his nosology, (class eccritica,) under the title of paruria erratica. It sometimes exists at birth, from an imperforate meatus urinarius, but the common cause is ischuria, from disease or derangement in the urinary organs; hence it is more frequent in females than males. The stomach and skin are the most common outlets, and it is also frequently discharged from the ear, breast, and umbilicus, and from almost every part of the system, even from the eye.

The history of this disease is enriched with many important and interesting cases. I shall only refer to some of them as briefly as possible. My intention in examining this remarkable phenomenon of nature is to show that the erratic urine in its passage to the foreign outlets from which it issues, is conveyed through the medium of the general circulation.

The earliest case on record is related by FELIX PLATERUS, of a female, who, being afflicted with a suppression of urine, a copious discharge came on from the right ear.

ALBERTINI relates a case of one, who, instead of saliva, spat up pure urine, as was proved by colour, taste, and smell.

MARCELLUS DONATUS relates a case of a female who discharged from the region of the stomach a fluid resembling urine.

Professor WINZER has recorded a case of a patient who discharged urine from the breast.

Dr. SENTER* of R. I. recorded a case of a female in the Transactions of the College of Physicians in Philadelphia, who discharged urine from her stomach, skin, and navel.

Dr. YEATES published a case in the London Medical and Physical Journal of a female, who being afflicted with a suppression of urine, discharged it from the stomach by vomiting, for several years, when she recovered her health by the function of urinary excretion being restored.

The most remarkable case of which I have any knowledge, occurred in my own practice; it may be found in the first number of this journal.

Cases of urine being discharged from the skin,† may be found in the writings of DARWIN, SAUVAGE, VANDERMONDE, VALLISNERI,‡ MALPIGHI, BARTHOLIN, and MORGAGNI.

Cases of urine being discharged from the stomach may be found recorded by VANDER-WIEL, HORSTIUS, MORGAGNI, HALLER, VALLISNERI, and DAWSON§.

Cases of urine being discharged from the internal surfaces of the mouth, fauces, &c. are mentioned by HEBERDEN, NATALI, ALBERTINI, CAMMERARIUS, WARNER, and HOME.

Cases of urine being discharged from the intestinal canal are related by BAGLIVI, PECLIN, RHODIUS, HILDANUS, HEAVISIDE,|| and others.

Many other cases may be found in the writings of CHEYNE, PORTAL, BOERHAAVE, HALLER, HOADLEY, LA MOTTE, in Journal de Medicine, ARETÆUS, LEOTICH, STALPOART, LA FRANK'S Chirurgiæ, BONET'S Sepulchretum, DUVERNEY, HOFFMAN, MARCHETT, SCHENK'S Observations, WOODWARD'S Cases of Ischuria, BENEVENIUS, ROLFINCH, HILSEHEAR,¶ HILDANUS, and in many others.

Three different hypothesis have been offered to explain these phenomena.

The first supposes a retrograde action of the absorbents. The second a vicarious secretion of the glandular system, or of the ex-

* See American Journal, Vol. I. p. 245.

† Phil. Trans.

‡ Oper. III.

§ Philosophical Transactions.

|| See Howship on the Urinary Organs.

¶ Liber III. p. 518.

treme vessels of the parts. The third, an absorption by the lymphatics of the bladder.

The first hypothesis, that of a retrograde action of the absorbents, was first conceived by that acute and ingenious physiologist, Mr. Charles Darwin, and published in 1778, in a prize dissertation. This theory was suggested to him from some facts which took place in *paruria mellitus* or *diabetes*. He depended chiefly for the support of this opinion upon analogy and experiments upon the dead subject. I shall only notice one or two important objections to this hypothesis, for it is not considered necessary to examine minutely his course of reasoning or experiments. A slight examination of the anatomical structure of this system of vessels will overthrow the doctrine of retrograde action. This system of vessels exists in every part of the body; they are smaller, more numerous, and anastomize much more frequently than any other set of vessels. Wherever they exist they are peculiarly distinguished by their very numerous set of valves with which they are enriched, far more than any other set of vessels.

"These lymphatic valves," says Cruikshank, "are composed of a semilunar membrane, or rather of a parabolic shape attached to the inside of the lymphatic vessels by its circular edge, having its straight edge corresponding to the diameter, loose and floating in the cavity; in consequence of this contrivance, fluids passing in one direction, make the valve lie close to the side of the vessels, and leave the passage free; but in attempting to pass in the opposite direction, raise the valve from the side of the vessel, and push its loose edge towards the centre of the cavity, preventing entirely the retrograde circulation. These valves are disposed in pairs, exactly opposite to each other, by which means the whole cavity is accurately closed."

These valves vary in proximity, though the intervals are often equal, measuring an eighth or sixteenth of an inch, so that it is impossible for any fluid to pass in a retrograde direction, unless the power of these valves are destroyed.

Darwin attempted to explain away this anatomical structure, which is so fatal to his doctrine, by supposing an excited action of these vessels, or a paralysis of their valves; but an excited action would make them act more powerfully, and to suppose that these valves which form so large a part of these vessels to be paralyzed, without destroying the powers of the whole system of the absorbent vessels, is an absurdity.

There is no analogy in the system which supports this hypothesis; no vessels which circulate their fluids in a retrograde direction. Darwin endeavoured to institute an analogy with the inverted action of the peristaltic motion of the intestines, but there does not appear to be the least resemblance.

His experiments prove nothing, for in the dead animal body the valves of the lymphatic vessels lose all their elasticity and power of resistance, and transmit fluids in every direction, as is proved by the experiments of MECKEL* and CRUIKSHANK.†

The fact of some substances passing from the stomach to the bladder so rapidly that it was supposed impossible for them to take the course of the circulation, gave this theory for a time a shadow of support. But the experiments of Sir EVERARD HOME and Dr. HALE‡ explain this fact, without supposing a retrograde action of the absorbents, or a direct communication between the stomach and bladder; they prove that “fluids taken into the stomach, instead of going the circuitous route of the intestines and lacteals, are absorbed directly into the blood-vessels. The time requisite, therefore, as far as the circulation is concerned, for fluids to pass from the stomach to the kidneys is not more than from two to three and a half minutes.” Dr. GOOD quoting Dr. WOLLASTON, says—

“With respect to Darwin’s conception of the retrograde action of the absorbents, it is so strongly opposed by the known structure of that system of vessels, that few I believe will admit it to be in the least degree probable;” and adds, “in truth, how much soever it may be caught up hastily by men of warm imaginations, or those who are fond of novelty, the soberer physiologists have never been made converts to it.”

Thus it appears that this ingenious hypothesis of retrograde action of the absorbents, once so popular, and so long supported by the talents of the learned and fanciful Darwin, cannot be substantiated either by anatomical structure of the vessels, by analogy or experiments.

The second hypothesis which has been advanced to explain the phenomena of erratic urine, appears to me to be so opposed to every known law of the animal economy, that I should scarcely have supposed it deserving of much attention, had it not been supported by some respectable authors, and lately advocated in an ingenious dissertation published in the *New England Journal*, which obtained the *Boylston Medical Society’s* prize. This supposes that the urine is secreted by the extreme vessels of the parts.

An argument is offered in support of this doctrine, founded on analogy; it has been noticed that some of the secretion of the glandular system are changed by disease, “as the secretion of the alimen-

* *Nova Experimenta et Observations*, &c. 8vo.

† *Edin. Med. Comm.* I. p. 430.

‡ See *Experiments and Observations on the communication between the stomach and urinary organs*, *New England Journal*, for 1822, Vol. II. p. 165.

tary canal in dysentery and diarrhœa, the saliva in hydrophobia, also the variety of changes which take place in the uterus from the appearance to the disappearance of the catamenial discharge, and from the time of conception to the termination of pregnancy." The analogy has also been traced to vegetable life, "as when a plant or flower is injured by the sting of an insect, or any other cause which produces an excrescence, as is frequently observed in trees and vegetables;" and hence, it has been concluded, that if these secretions can be so changed, they may take on any other action, as easily, and secrete urine. The author does not appear to have perceived any difference between one gland assuming the healthy functions of another, and its natural secretion becoming diseased.

It is true, that the secretions in every part of the system are frequently changed by disease; but it is not true, that the powers of any gland were ever so changed as to assume the healthy functions of another. Is there a case on record where a set of vessels formed to elaborate a particular secretion, have had their function so changed as to be able to elaborate another, entirely different; did the breast ever secrete wax, or the ear milk; did the eye ever secrete gall, or the liver the tears? Where then is the resemblance, where the analogy, for the eye, ear, or breast secreting urine?

The second argument in support of a vicarious secretion of the extreme vessels, is drawn from the diseases of the urinary organs; it has been noticed by Bailey, Bichat, Morgagni, and others, that when the kidneys are so diseased, that nothing but a cyst or sac remains, still they retain their powers of secreting urine; and hence, it has been said, that as these bodies are so changed by disease, that they do not resemble the kidneys either in structure or form, that any gland in the system might as easily secrete the urine as these mere cysts or sacs. This is a most unfortunate argument, for it proves precisely the opposite of that which was intended—that the kidneys are seldom so diseased but they retain their function of secretion—that, when their form and structure are so changed as to resemble a mere cyst or sac, still they retain the power of elaborating the urine; and although so much diseased, yet no other set of vessels take on a vicarious action.

If it could be shown, when these organs were so changed in their form and structure by disease, as to resemble a mere sac, that they were deprived of the function of elaborating the urine, and that some other system of vessels had, apparently, taken on a vicarious secretion, it would be a strong argument in favour of this hypothesis; but all the facts upon this subject prove exactly the reverse of this doctrine. In uroplania it is well known that the kidneys are generally in a per-

fectly healthy state, and perform the function of secretion. These two arguments are all that have been advanced to prove this very fanciful and novel doctrine of the secretion of erratic urine by the extreme vessels.

The first from analogy does not afford it the least colouring of support, and the last entirely overthrows the hypothesis.

A very forcible objection to this doctrine is the importance of the extreme vessels, nearly all the changes in the system are performed by these vessels—by them all the secretions are elaborated—by them the breast is supplied with milk, the eye with tears, the liver with bile, the kidney with urine—by them every surface is lubricated. If these vessels should take on a vicarious secretion of urine, all their other functions of secretion must be interrupted or suspended; now we know that either the interruption or suspension of a single secretion produces great disturbance in the system, and is it not absurd to suppose that life could be supported under these circumstances?

Another objection to this theory is, that in cases of uroplania, urine is almost always found in the bladder; this was generally the case in the patient who came under my care; here the urine was discharged in large quantities, from the left eye, the ears, nose, stomach, breast, and navel: if these were a vicarious secretion of the glands, or of the extreme vessels of the parts, why was it secreted by the kidneys—and if secreted by the kidneys, where was the necessity of the glands, or the extreme vessels of the foreign outlets, taking on a vicarious secretion? Is not this single fact alone sufficient to overthrow beyond any doubt this hypothesis?

In the case above alluded to, it was noticed, that when the urine was drawn off frequently from the bladder, it was diminished at all the other outlets; this shows that the kidneys were the source from which these discharges proceeded. If the urine which was daily excreted at these various outlets, was a secretion of the extreme vessels of the parts, why should the excretion from the bladder increase or diminish the discharge from these outlets.

In the same case it was also noticed that the urine from the bladder, and all the other outlets, frequently became black; now this changing of colour affords a most convincing proof of the identity of the fluids discharged. If they were secreted by the extreme vessels, or glands of the parts, how could the colour so simultaneously be changed—for one gland in the system may be diseased, so that the function of secretion is entirely interrupted, while others are not in the least affected. Other objections might be offered, but it is unnecessary.

Having shown that the phenomena of erratic urine cannot be ex-

plained by the two preceding hypothesis, I proceed to examine the third, which supposes it to find its way to the foreign outlet by the medium of the general circulation; the lymphatics of the bladder are supposed to absorb the urine, and carry it into the circulation, from which it is separated by the extreme vessels of the parts.

This doctrine, so simple and plain, has never advanced beyond the rank of an hypothesis. In 1823, when I instituted a course of experiments to prove that the urine found its way to the foreign outlets through the general circulation, I supposed, that this theory was entirely new, but upon investigation, I find that several authors have advocated, or rather hinted, this doctrine. Dr. Good, in his *Study of Medicine*, writes with much caution upon this subject, he says, “in most instances it is not* a vicarious discharge, or in other words, a secretion of a different kind, compensating for a destitution of urine, but an urinous fluid apparently absorbed after its secretion by the kidneys; and conveyed to the outlets, from which it issues by *a path, or under a protection that has hitherto never been explained.*”

The first objection to our hypothesis is, that the urine is an excrementitious secretion, wherefore it is thought that it would produce very serious consequences if retained in the system. But this, in my mind, does not form a strong objection, for the disturbance in the system will depend altogether upon its peculiar stimulating qualities, and not upon this principle. The bile is a recrementitious fluid secreted for important uses; but, the simple fact of its being recrementitious and not excrementitious, will not make it the less harmless, when admitted into the circulation.

Castor oil, an extraneous substance, does not produce so much irritation in the system, when injected into the veins, as some of the secretions of the system; hence, its being excrementitious is no objection. But it is doubted “if the urine is a purely excrementitious secretion, if so, it is the only one in the system, all the others answer some useful purposes after their secretion, the tears lubricate the eye-balls, the synova facilitates the motions of the joints, the saliva promotes digestion—and it is difficult to suppose that the secretion of the kidneys should form an exception to the general law of the animal economy; hence, a strong analogy justifies the opinion, that the urine† is not purely excrementitious.”

* See Good's *Study of Medicine*. In his *Nosology*, page 351, of erratic urine, he says, “of the manner of which conveyance, we are as ignorant as the mode by which various substances travel from the stomach to the kidneys, apparently without passing through the general course of the circulation of the blood.”

† Paris's *Pharmacologia*.

The second objection to our hypothesis is, that it will not explain those cases of uroplania where the urine is not found in the bladder, or where the kidneys are wanting. The urine may be secreted, and carried into the circulation by the absorbents of the kidneys and ureters, without being deposited in the bladder; for the absorbents of these organs are as active as those of the bladder. Many cases of this kind are on record, I shall hereafter notice particularly a case from Bailey's *Morbid Anatomy*, and also one from BEDDINGFIELD's works. The kidneys are seldom so diseased but they perform the function of secretion. Bichat says, "that cysts and hydatids are developed in them without deranging this function," hence we find no difficulty in believing, that in these cases where the urine is not found in the bladder, that it is absorbed and carried into the circulation by the lymphatics of the kidneys. In those persons where the kidneys are wanting, a case of erratic urine cannot exist, the urine could not be separated from the blood.

The third objection offered to our hypothesis, is the great derangement "which uniformly results from a suppressed secretion or a destitution of urine." That this is the effect of its being carried into the general circulation, is well known; but it is no argument against the fact; in the case which came under my care, the disturbance and irritation in the system was so great, that it was not supposed that the patient could survive from day to day; but when the discharges became well established at the foreign outlets, the disturbance in the system was much relieved. Could any person believe that this irritation and disturbance was owing to the changes going on in the extreme vessels of the foreign outlets, that they were taking on a new secretory action; if so, the irritation would have been local; it would have been confined to the eye, ear, navel, and other outlets; but in these there were no local irritation that would justify this opinion.

The fourth objection is from Darwin; he asks, how it is possible, if the urine passes through the circulation, that it should be so hastily collected together in one place? This, in the days of Darwin, might have been more difficult of solution than it is now, for the experiments of Sir Everard Home and Dr. Hale, fully answer this objection.

The fifth objection is, that this hypothesis "is most decidedly refuted by experiments;" it is said that so mild a substance as castor oil, when injected into the veins, produces great irritation; "that venous blood, which is more nearly allied to arterial blood than any other substance, frequently causes death, and that urine is one of those substances which always produces death." But these experi-

ments cannot be relied upon, for we know that venous blood is frequently admitted into the circulation unchanged, without much injury to the system, as in cases where the foramen ovale remains open after birth, and that urine has been injected into the veins without producing death. Bichat* says, that the secreted fluids can re-enter the system without causing death. Morgagni says, that bile may be injected slowly into the veins without injury. Bichat injected bile, mucus, saliva, and urine into the jugular veins of dogs; "it gave rise to weariness and loss of appetite, yet their health and vigour was gradually restored." Tartrate of antimony has also been injected into the veins without injury.† But even admitting that the mildest fluid could not be injected into the blood-vessels without producing immediate death, yet this fact would afford no foundation of argument against our hypothesis, for the manner in which the urine is carried into the circulation is so different; the lymphatics of the bladder absorb the fluid so slowly that the system becomes gradually accustomed to this irritation; but, when injected into the veins, the impression is made so suddenly, that we might easily suppose that the one would produce far greater irritation than the other. Besides, when a substance is injected into the veins a volume of blood is displaced equal to the substance injected, and the vessels are subjected to an entirely new irritation.

Having answered all the objections, I now proceed to the arguments upon which I rest the truth of this hypothesis. It is the most simple of all the explanations of these phenomena, and nature, in all her operations, generally selects the most simple means to effect her purposes; this supposes no new changes in the system, no new action is imposed upon the absorbent system of vessels, no new powers of secretion are required of the extreme vessels.

A strong analogy also justifies our conclusion; bile is taken up by the absorbents and carried into every part of the body; it is found in the brain, adnata, conjunctiva, and is poured from the extreme vessels throughout the whole system, so also are the other secretions.

That the lymphatics of the bladder do possess the power of absorbing its contents and returning it into the circulation is beyond a doubt. Dr. Gregory says, that the suppressed urine is again taken up into the blood, and is poured out over the whole body, and is sometimes ef-

* See his Anatomy.

† Dr. Meplain of Doujon, injected four grains of tartrate of antimony into the veins of a young woman for the purpose of "dislodging lumbrici from the œsophagus; in twenty minutes vomiting came on, ten lumbrici were brought away, she soon recovered."—See *London Med. Chir. Review*.

fused upon the brain itself. Mr. Cruikshank says, in his work on the absorbents, "there is another fluid which the lymphatics take up on particular occasions and carry into the blood, I mean the urine. I am perfectly confident of this," he says, "in attending to what has happened in my own person."

Dr. Bailey in his *Morbid Anatomy*, notices an enlarged kidney, which was so much diseased and deranged in its structure, that it would have been impossible for it to have contained all the urine that was secreted, and consequently the absorbents of this viscus must have been employed partly in removing the diseased portions in order to make more room for the urine, and partly in taking up and conveying away this fluid after it was secreted. Beddingfield also notices this absorption:—

"I injected," says he, "rather more than a pint of warm milk and water into the bladder of a patient who had been suffering from an ulceration of the inner membrane of that reservoir. The fluid after a minute occasioned uneasiness, which the patient imputed entirely to over-distention. This unpleasant feeling gradually subsided, and at the expiration of half an hour, he said that he was certain that the bladder was empty. Upon desiring him to let any fluid pass that might be in the bladder, he passed through the catheter about two ounces of highly fetid pus mixed with a very small quantity of milk and water. The removal of the injected fluid could only have been performed by the absorbents. Of this I feel persuaded," says he, "that a much larger quantity of fluid is deposited in the bladder than is expelled from it." He also observes, "I have the kidney and ureter of a patient who died of phthisis; the kidney is free from disease, and the ureter is distended with urine to three times its natural size; the urine is prevented from escaping by an impervious structure of the ureter. The patient from whom it was taken was never known to be labouring under any diseases or derangements of the urinary organs. Had not the absorbents possessed the power of removing the urine from the ureter as it was secreted from the kidneys, the tube must have been ruptured from its excessive accumulation."

That many substances do enter the circulation unchanged, is a well established fact in pathology. Dr. Paris, in his *Pharmacologia*, observes, "that it is a fact which admits of chemical demonstration, that certain bodies, as the alkaline salts, essential oils, mercury, particular bitter principles, colouring matter, &c. are capable of evading the assimilating functions and entering unchanged the circulating currents."

It is also observed by Cruikshank, that not only the mild, but even the most acrid substances, as the oil of turpentine, cantharides, and others may enter the circulation unchanged.

If then no objection can be offered to our hypothesis which cannot be easily reconciled; if it is the most simple explanation of this phe-

nomenon, and can be explained without requiring any new changes in the system; if it is supported by the strongest analogy; if the lymphatics of the bladder have the power of absorbing not only the urine, but also other substances more acrid than the urine, and returning them unchanged into the circulating current; and if these substances can be contained in the general circulation without producing much derangement in the system, where is the difficulty in accounting for the phenomena of erratic urine by supposing that it finds its way to the foreign outlets, from which it is discharged by the medium of the circulation. Darwin's conception of the retrograde action of the absorbents is completely overthrown by the anatomical structure of this system of vessels; and a supposition of a vicarious secretion in the extreme vessels, is opposed by all the known laws of the animal economy; hence the truth of our hypothesis is reduced to a demonstration.

But unwilling to trust alone to hypothesis, and to remove every doubt, I resolved to test its truth by actual experiments. The idea naturally occurred, that if this theory be true, the urine might be detected in the blood. Accordingly I instituted the following experiments on the patient whose case is related in the first number of this journal. In the summer of 1823, I drew off sixteen ounces of blood, the serum soon separated which was found to have the colour, taste, and smell of urine, and when projected on a heated shovel, gave out that odour so peculiar to this secretion, indicating the presence of urea.

In the summer of 1824, for the gratification of some of my medical friends, I was induced to repeat my experiments, and further to test their accuracy by chemical analysis. I drew off sixteen ounces of blood; the odour, taste, and smell, were as before; the serum when projected on a heated shovel, gave out very copiously the same peculiar odour. The serum was gradually heated until it coagulated; about two ounces of a high-coloured fluid was separated, having in a high degree all the distinguishing properties of urine; this was evaporated to the consistence of a syrup, re-dissolved in alcohol, and again evaporated; nitric acid was then added, upon which a number of shining crystals in the form of plates were precipitated, forming the nitrate of urea.*

These experiments being so conclusive, the subject became more and more interesting, and I therefore instituted another set of experiments.

On the 9th of December, 1824, at eight o'clock, P. M. I injected

* The two first experiments have been repeated with the same results by Thomas W. Webb, M. D.

into the bladder four ounces of a saturated solution of nitre. This was injected slowly, carefully watching the effect, for I had determined, if it produced much pain, or any disagreeable symptoms, to abandon my experiments. It produced considerable pain for a few minutes, and a disposition to pass the urine from the navel. In fifteen minutes after the nitre was injected, about a pint of urine was discharged from the navel; this produced an unusual degree of pain, and a sensation of burning; the nitre could not be detected in this discharge. At ten o'clock, about two hours after the injection, eight ounces strongly impregnated with the nitre was discharged from the navel; the nitre was found to be contained in the discharges by analysis. I evaporated six ounces, and obtained two drachms and eighteen grains of nitre in regular crystals.

On the succeeding day at twelve o'clock, 10th inst, I injected four ounces more of the saturated solution of nitre; this did not produce as much uneasiness as the first. At eleven o'clock the same evening, 10th inst. I drew off from the arm sixteen ounces of blood; the serum was allowed to separate; the nitre was distinctly perceived in the serum by taste; a paper being wet in it several times, on burning deflagrated brilliantly. I evaporated four ounces of the serum, and it produced one drachm and nine grains of nitre in regular crystals. The discharges from the ears and breast were also impregnated with the nitre, but not in so large proportion as the blood.

At five o'clock on the evening of the 11th inst. twenty-nine hours after the last four ounces of the solution of nitre was injected, twelve ounces of urine was discharged from the navel, more strongly impregnated with the nitre than any former discharge; in passing off an unusual degree of pain was produced. I evaporated eight ounces, and obtained five drachms and three grains of nitre in large and regular crystals, much larger than those obtained from the blood.

These experiments form the most conclusive and convincing evidence of the truth of our hypothesis there can be no doubt—for the urine is actually found in the blood, and its pathway to the foreign outlets is distinctly traced.

ART. VII. *On the Respiration of Cold Air in Pulmonary Diseases.*

By C. DRAKE, M. D. of New York. Communicated in a letter to Dr. CHAPMAN.

SINCE writing the letter to Dr. SMITH, which was published in the third number of the *American Journal of the Medical Sciences*, I have extended the trial of the respiration of cool air to a considerable number of additional cases, and have obtained effects, if not as constantly beneficial as I could have wished, at least sufficiently so to inspire me with confidence of its value in some of the forms of pulmonary disease. The greater part of my cases were chronic catarrhs of long standing. Of these, a part had been preceded by hæmoptisis, a part presented indications of slight and irregular hectic, with more or less expectoration; and in one, pectoriloquy was distinctly heard in the right lung; but none of them ordinarily exhibited much inflammatory excitement, beyond some preternatural frequency of pulse, with slight pain or sense of soreness in the chest. In all these cases the cool air was uniformly serviceable, provided the patient did not labour too much in the respiratory effort, or persevere too long in a mode of respiration which, notwithstanding every precaution, is artificial, and consequently more or less stimulating, from the undue muscular exertion. On this account I am fearful that the remedy will not be found suited to such cases as are attended with much febrile excitement, unless we could contrive a means of causing the patient to take in and expel the air as he respires it naturally, without attending to the function. In two cases where the pulse was 120 and upwards, with considerable derangement of the respiratory function, I found the remedy fatigued the patients, and aggravated some of their symptoms, (although in one it certainly relieved the cough,) and I was obliged to desist from its further use. Others have failed to derive as much benefit from the remedy as they otherwise would have done by persisting in its use too long, and repeating it too frequently, especially during the first few days. In general, an hour's application, repeated thrice in the twenty-four hours, I believe will be found preferable to the hazard of enduring fatigue by a more prolonged respiration; and perhaps it is better for the first day or two to limit each trial to half an hour, so as to gradually accustom the patient to the use of the tube.

I have employed the remedy in two additional cases of asthma, and in both instances it relieved the spasmodic breathing in a short time,

but as I soon after lost sight of the cases, I cannot speak of its ulterior effect.

As to the temperature of the air for respiration, I have found that it may be reduced very low with advantage. In some instances I have reduced it to zero, and even a few degrees below, which patients have preferred to a higher degree; but in general, I have contented myself with employing ice simply, which brought the air to 32° or 34° , and this seemed to answer very well.

As the warm weather has advanced, I have been less attentive than formerly in maintaining external stimulation by means of the vest or irritating plasters, and I do not find the remedy less efficacious on that account, or the neglect attended by any ill effect, except perhaps that such patients, after respiring very cold air for a considerable time, are more liable to complain of general coldness, amounting almost to a rigor, than when the chest has been kept warmly clad or stimulated. In no instance, however, did any ill consequence arise from this state of things, which I attribute to the blood being diverted from, instead of being accumulated in the diseased organ, as happens when a chill arises from exposure of the external surface to cold and moisture.

I have made a number of experiments, both in pulmonic cases and on healthy individuals, for the purpose of ascertaining the effects of cool respiration on the pulse. In the great majority of instances the pulse was rendered both slower and fuller; sometimes only fuller, and now and then somewhat more frequent. One or two hours respiration of air brought to zero, or even 10° above, would usually reduce the pulse from 16 to 24 beats, provided it was not much above a hundred; but I was not successful in making a decided impression on it when it was beyond that point in frequency. Forty-seven was the slowest I was enabled to render it, when it rose up under the finger very full and sluggishly. In one healthy individual it was reduced in two hours from 88 to 52, in another from 72 to 56, and in a third from 80 to 64 in one hour.

After all, it will require a much more extended experience than I have yet had, especially during the heats of summer, to form a correct estimate of the value of this remedy, and to ascertain the particular forms of pulmonic disease in which it may be advantageously employed, for doubtless it will not be found suited to all indiscriminately.

That others may be induced to give the remedy a trial, I have delineated a vertical section of the apparatus I have devised for lower-

ing the temperature of the air, which I request may be inserted in the next number of the *American Journal*.

With ice alone the air in the reservoir is brought to 32° , and remains at 34° after an hour's respiration. Ice mixed with common salt reduces it to zero, or even 3 or 4° below, and which will be found after an hour's respiration not higher than 10° . Three or four gallons of pounded ice will last about forty-eight hours, and mixed with salt half that time. I have not found that even two of these refrigerators filled with ice, and placed in an ordinary-sized room, produced any sensible impression on its temperature.

The refrigerator, of which the plate gives a section, is made of zinc, is twenty-two inches high, fourteen inches diameter, and raised one inch from the floor by standards. For a more particular description I refer to the plate with the explanation.

I have generally used a tight wooden vessel to enclose the refrigerator instead of the layer of charcoal, and find it to answer the purpose equally well, and is moreover less expensive and less liable to injury from use.

EXPLANATION OF THE PLATE.

- A. A. Compact layer of pulverised charcoal surrounding the ice-vessel, two inches thick.
- B. B. Ice-vessel of three and a half gallons capacity.
- C. C. Reservoir for air two inches deep at the circumference.
- D. A piece of charred cork placed in the centre of the bottom, and pierced with a hole one inch and a quarter in diameter, for the admission of air.
- E. E. A space of a quarter of an inch between the charcoal and ice-vessel for the passage of air around the ice.
- F. F. Perforations around the upper part of the ice-vessel to let in the air over the ice.
- G. G. Perforations in the top of the inner cylinder for the admission of air.
- H. H. A space of one-third of an inch between the ice-vessel and the tube for the passage of air into the reservoir below.
- I. A tube one inch and a third in diameter, extending down within half an inch of the bottom of the reservoir.
- K. Where the tube of the lid slides over the tube of the cylinder.
- L. The ends of the tubes connected by means of gum-elastic bags to form a joint flexible in every direction. The tubes are one inch in diameter.

- M. A valve to prevent the ingress of air resembling a puppet-valve, except that it is flat.
- N. A wire shoulder on which the valve plays.
- O. End of the tube, flattened to form a mouth-piece.
- P. P. Lip of the lid to render the ice-vessel as near as possible air-tight.
- Q. Pipe to draw off the water of the melted ice.
- R. Pipe to draw off any water that may get into the reservoir.

New York, May 20th, 1828.

ART. VIII. *Observations tending to ascertain whether the Ancients were acquainted with the Disease known to us familiarly by the name of Croup.** By JOHN REDMAN COXE, M. D. Professor of Materia Medica and Pharmacy in the University of Pennsylvania.

IN the year 1765, Dr. HOME called the attention of the medical world to a disease of an highly interesting nature, by his "Inquiry into the Croup." Several essays subsequently appeared on the subject, and amongst others, that of Dr. C. F. MICHAELIS, at Göttingen, in 1778. This essay was probably the first scientific one, which takes up the inquiry in all its different bearings, under the title "*De Angina polyposa, sive membranacea.*" It is not my intention, at present, to advert to it, any further than is connected with the *presumed* origin, or rather first annunciation of the disease in question. At p. 5, he thus writes:—

* It may be recollected, that about twenty years ago, the Emperor Napoleon proposed a prize for the best essay on croup, in consequence of the death of his nephew, his then contemplated successor to the throne of France. Amongst the queries framed on this subject, was the following, on the origin of that disease. "Among the descriptions of diseases which have been transmitted to us by the ancients, or by the older authors of the last century, are there any which present the diagnostic symptoms of croup?"

At that period my mind was much alive to the interesting inquiry, contemplated by the whole tenor of the programme presented to the medical world, in consequence of all my children being more or less subject to that disease—and I had then, and subsequently have, collected a very large body of facts from the sources adverted to; some of which, I have thought, might not be uninteresting to the profession; and have now embodied a small proportion of them, sufficient, probably, if not to determine the question, at least to awaken the minds of my readers to it, that they may extend still further so fertile a subject of investigation.

“Primam morbi notitiam, apud *Tulpiam* inveniri arbitror. Narrat enim ille *Medicarum Observationum* L. V. casum, qui observatoris verbis ipsius relatus, huic commentationi, (p. 300,) annexus legitur, & qui verum nostri morbi exemplum esse mihi videtur. Nec tamen in arctis lectionis meæ limitibus, priorem *Tulpio* neminem fuisse, apud quem vestigium nostri morbi inveniat, affirmaverim.”

“Post *Tulpium*, qui, licet rem vidisset, claram tamen de ejus natura ideam minime habuit, altum de hoc morbo diu fuit apud autores silentium. Reperio quidem apud *Jac. Bontium*, *Balloniumque* unam alteramque morbi singularis, nostro simillimi, historiam; nolo tamen, ob summam narrationis brevitem, judicium ferre, num istæ observationes ad anginam nostram pertineant, nec ne.” He gives these cases in his appendix, p. 302. And it may be remarked here that the one from *BALLONIUS* is also quoted from the *Sepulchretum Boneti*, 1, 484, by *CHEYNE*, in 1801, who has given us a very interesting Essay on Cynanche Trachealis, in which he has placed the uncertain knowledge we possess of it on a very proper footing, in the following words, p. 11. “It might seem strange that a disease so striking in the symptoms, and so speedy and fatal in the event, should not have been clearly described earlier than the middle of last century, were it not remembered that formerly all the ailments of children were much neglected, and that even the most eminent physicians, when called to children, went with reluctance, judging their diseases to form a labyrinth for which they had no clue.”

The doctor has however affirmed, that “the descriptions to be met with in every systematic writer of that dangerous angina in which no tumour is to be found in the fauces, however vague they may be, afford sufficient evidence that the disease was not altogether overlooked,” p. 12, of which he has given some few quotations, insufficient, however, I apprehend, fully and satisfactorily to justify his opinion; and that merely from the very concise character of his quotations, by which their value may be considered as not fully developed. At the hazard of being considered too prolix, I deem it, however, of sufficient importance to this inquiry, to lay before the medical world a large mass of extracts by which the question may be fairly settled, especially as I trace it downwards from the fountain head itself of medical observation and inquiry; and I think I shall satisfactorily prove that this disease was not unknown to *HIPPOCRATES*, *GALEN*, and a long train of writers, anterior to those thus quoted or referred to by *Michaelis*, *Cheyne*, and others, as the first authorities for its appearance.

The neglect of writers of the present day, to look into our older
No. V.—Nov. 1828.

authors, and to examine accurately what is said, under a *vast variety of names*, as pertinent to the inquiry into, and consideration of this disease, especially; is evinced by my having, I think, discovered no inconsiderable number of facts that seem to apply to it alone, under all the following heads:—catarrh, coryza, branchus, cynanche, angina, dyspnoea, asthma, orthopnoea, anhelatio, respiratio læsa, vel difficilis, peripneumony, polypus, rheumatism, fluxio, distillatio, tussis, hæmoptysis, struma, vomica, empyema, apostema. Even under that of laryngotomy I have reason to think that some older writers refer to its probable utility or inutility in cases of croup.

It would seem improbable that a disease of the nature of croup, should not have been frequent and well known at all periods, and in almost every situation. Not arising from any *specific* cause of a contagious nature, but dependent greatly on the vicissitudes of weather, that is to say, on causes always acting, and circumstances that must have existed in a greater or less degree ever since the creation of the world; its *apparent* notice for the first time by GHIZI, HOME, and others, under new appellations, is, I conceive, a stigma on our profession, evincing, that, neglecting the treasures of their medical ancestors, a change of nomenclature could baffle their inquiries on a topic so interesting as that of croup.

The baneful effects of perpetual fluctuation in nomenclature has been equally felt in medicine as in other scientific pursuits—and it almost admits of demonstration, that if a physician desires to become acquainted with the diseases of antiquity, and compare them with those of his own time, he must extend his researches beyond the mere nomenclature of books, and draw his deductions rather from the unchanging symptomatology that has reached us, than from a pertinacious adherence to names which have fluctuated perpetually in the meanings ascribed to them.

In taking a review of the antiquity of croup, it is not useless likewise to premise, that from the imperfect state of anatomical knowledge, and the infrequency of post mortem examination, even in times comparatively modern, the pathology of disease was vague and unsatisfactory—the theories advocated were founded in imperfect or undecided views, in which perhaps we are not behind them. The absurd notions respecting *catarrh*, the sole substratum nearly of all their crude opinions from Hippocrates himself, are, nevertheless, of infinite importance in developing what was known of croup to the ancients; and I find it therefore essential to take a glance at some of the dominant opinions of this *general* disease, as well as of sundry diseases founded on its immediate or direct operation on the body,

and others only remotely dependent on it; in all which, I think, *obvious* traces are to be found, that croup was not a stranger to the earliest writers on medicine.

It may be noticed also, that, from the nature of the views taken of many of the diseases above-mentioned, they are not less the care of the surgeon than of the physician, properly so called; and hence, some of my references are connected with the writers on Surgery.

The want of an intermedium, such as that of the press, was undoubtedly a powerful obstacle to many individuals of the most extensive practice, and enlarged views on medical subjects, to transmitting their observations to their posterity. If we recur only to facts in this particular, connected with our own country, how little has been transmitted to us during a period of nearly one hundred and fifty years since the settlement of Pennsylvania by William Penn, by the succession of observant and intelligent physicians, of the appearance of diseases under their respective notice! How greatly this is now to be regretted, I need scarcely say! No periodical works existed until the Medical Repository opened the way, in which they could announce their observations—and unless by a particular essay on some particular subject, occasionally given to the world, the important observations of each individual most generally died with him, for want of a channel, now become almost too exuberant. If then such difficulties appear, even in our own times, how much more must this have been the case when printing was altogether unknown! We have great reason therefore to bestow unqualified praise on the physicians of former times, who, in spite of these difficulties, have nevertheless transmitted to us the observations made by them and their predecessors; and we are proportionally bound not to forget entirely the obligations we owe to them, by setting them aside as useless and unimportant; instead of appreciating candidly and justly their uncommon merits, by a due recurrence to the writings and remarks of the few who have reached us.

In the extracts I propose to give, I shall not for an instant pretend that all are accurately and distinctly connected with the disease in question; but I have thought it better to embrace at times, even doubtful remarks, than to leave them altogether unnoticed. Fearful of conveying a meaning different from the original, I have deemed it proper to give them in the words of their authors, for the most part, leaving it to the judgment of every individual to decide for himself, how far I am correct in the opinions I have ventured to adopt. Sufficient is however apparent, (and much more might have been adduced which I have collected,) clearly to prove, I think—1. That

the ancient physicians had fully remarked every obstacle to respiration which is now perceived, and particularly *that*, arising from increased secretion in the trachea. 2. That anginose affections, (internal,) killed in one, two, three, and four days, or terminated on the seventh in peripneumonia and cerebral affections, &c. as we now perceive in croup and its sequelæ. 3. That the discharge of a membrane, &c. from the trachea, is described as accurately as an imperfect pathology would then permit. 4. That this disease was noticed both in children and in adults.

Although Hippocrates is the oldest authority in medicine, whose writings have reached us, and we must consequently be satisfied to rest on the accuracy of his statements; yet we are not to imagine that no information prior to his own, was attainable; for he himself repeatedly refers to the ancient medicine, and to physicians* who preceded him. Indeed, I think his treatise, *Περὶ ἀρχαίας ἰατρικῆς*, i. e. *de prisca medicina*, is at least to the inquirer into the origin of his profession, one of the most interesting. How far he may be correctly styled the *Father of Medicine*, may admit of some dispute, especially since, (although we usually speak of the writings of Hippocrates as of an individual,) there were no less than *seven* of the same name and family, who all practiced physic, during a period of about two hundred years, as may be seen by referring to SPRENGEL or LE CLERC's History of Medicine; and although the second of the name is principally regarded as the chief, yet it is undoubted that the writings called by the name of Hippocrates are many of them apocryphal, whilst of several of the remainder, it is not fully determined to which of the seven they belong. I am persuaded, therefore, that the illustrious title above mentioned, as well as that of the divine old man, and several others, are to be considered as abundantly problematical. However, admitting the claim as perfect, I proceed to state from those writings a few particulars connected with the object of research, from the folio edition by FÆSIUS of 1624.

In the book *Περὶ φύσεως παιδίου*, (*de natura pueri*,) at p. 249, he has the following expression, which may be regarded as the basis of his doctrines on the subject of catarrh, *ὁ ἐγκεφαλὸς ἐστὶν μετρωπολὶς τῆς ψυχῆς καὶ τῆς χολωδῆος*. That the brain is the metropolis or seat of frigid, glutinous, or pituitous humours. It is proper to notice this, as explanatory of the origin of catarrh in all its varied ramifications; an exuberance altogether due to Hippocrates, and pertinaciously continued by almost every author to within a very short pe-

* *De Ratione Victus in Morbis acutis*, Fæs. Ed. p. 303.

riod of the present times, with scarcely a dissenting voice. The celebrated, (and justly so,) VAN HELMONT, indeed, about two hundred years ago, did vigorously, and I think triumphantly, refute these opinions in an essay under the sarcastic but judicious title of *Deliramenta Catarrhi*—and ETMULLER likewise, though with less energy, opposed it. As we shall at a future part of this essay give the opinions entertained of catarrh more fully, I shall extract but little from Hippocrates, compared to what his writings would permit.

Speaking of catarrh, (lib. de flatibus, p. 299,) or fluxio, in reply to a supposed question that may be made to him, how fluxion can take place or arise from flatus? Among other parts, he says, “ubi igitur ad oculos venerit, ii laborant; si ad aures, ibi morbus est; si ad nares, gravedo exoritur; si *ad pectus, raucedo* appellatur.” The word *rauacedo* in the Greek is *Branchos*, and we shall find it hereafter one of considerable import.

“At verò fluxiones,” (says he in his book *de locis in homine*, p. 412,) “ex capite, septem sunt.” These he enumerates, but as I shall have occasion to recur to this again, I shall postpone till then the enumeration, my only object at present being to show that this monstrous doctrine has had existence from the earliest records of our science. And I now proceed to state what Hippocrates has transmitted to us on the subject of *Angina*. In his *Prænotiones*, p. 45, we find his celebrated axiom relating to this generic term in which all subsequent writers agree, (as we shall show,) by quoting almost expressly his words, which are as translated by Fœsius, “*Angina, (κυανγχη, Cyanache,) gravissima quidem est & celerrime interimit, quæ neque in faucibus, neque in cervice quicquam conspicuum facit, plurimum verò dolorem exhibet, & difficultatem spirandi, quæ erecta cervice obitur, inducit. Hæc enim, eodem etiam die, & secundo, & tertio, & quarto strangulat.*” He repeats this subsequently, at p. 175, in the *Coacæ Prænotiones*. “*Anginæ in quibus neque in collo, neque in faucibus quicquam apparet, sed quæ vehementem suffocationem ac spirandi difficultatem adferunt, eodem aut tertio die necant.*” If it is not croup to which he refers, certainly I know no species of angina that terminates so rapidly at present, as to kill on the first day! Its prolonged existence then, as now, seems to have terminated in pulmonic disease; for he further adds, “*quibus angina ad pulmonem divertit, partim quidem intra septem dies pereunt, partim verò liberati, pus intro colligunt, nisi pituitosa sursum educantur.*” And the importance of a free and speedy discharge of phlegm is well affirmed in the next page, “*Angina laborantes, nisi celeriter cocta expuant, perniciose habent.*”

In his treatise "*De Ratione Victus in Morbis Acutis*, p. 386, I think the nature of croup in its worst form of membranous adhesion is conspicuously detailed; the statement at least seems scarcely applicable to any other form of disease. "Ex multa autem & crebra respiratione, sputum summè glutinosum citra coctionem redditum, egressum fieri prohibet. Quinetiam cartilaginosis asperæ arteriæ corporibus, (pulmonis bronchiis dictis,) adhærescens, stertorem inducit, cumque ad hoc devenerit, tum, plærumque mortem infert."

Hippocrates notices the frequency of angina, (χρῡαγγη,) in winter and spring, at p. 397—"Angina fit cum sub hyemem aut vernum tempus, multa & lenta fluxio ex Capite ad jugulares venas defluerit." In his treatise *de Morbis Vulgaribus*, p. 1194, he speaks of the violence and difficulty of the coughs, in some cases, with little or no fever, in which no pulmonic inflammation attended, nor other means by which a judgment of the complaint could be attained, "verum in voce sola, judicio decernebatur"—and at p. 1211, & seq. follow some cases, of which a few appear allied in a measure to croup. "Unctor apud Harpalidem, cruribus & manibus imbecellior factus, medicamentum sursum ac deorsum purgans temere ebibit, ex quo febris invasit, & ad arteriam, (Trachea,) tale quiddam defluxit, ut loquentem impediret, & inter loquendum crebriorem anhelitum redderit, non secus ac Angina cum raucedine laboranti." (We may notice that angina is here spoken of, as if occurring with and without hoarseness.) "Cum deglutiret præfocabatur, cæteraque patiebatur, quæ qui Angina laborant, tumor tamen non aderat." If this case may be esteemed as approximating croup, it would seem to be in an adult. In another case of a boy, at first, apparently of pleurisy, after the twelfth day, "precedente morbo, spiratio densior semper fuit & creber anhelitus, cum stridula quadam ad pectus & arteriam asperitate," &c. p. 1215. The patient died on the twenty-eight day; and in another, p. 1216, "spiratio crebrior adfuit, eique vix respiranti arteria sibilum quendam edebat," &c. In these, and several other cases, many symptoms are mentioned that seem to characterize croup in a greater or less degree, and both of an acute and chronic form. Leaving this, however, to the deliberate judgment of the reader, I shall draw no further on Hippocrates, although I have a much greater number of facts from his writings, which I consider adapted to strengthen my opinion that croup was by no means an uncommon complaint in his time, but masked by the absurd and prevalent pathology of the day.

The next in order to be noticed is CELSUS, who flourished about the period of our Saviour's death, and who is, I think, more from

habits of association, rather than from an *actual examination of his* writings, too generally regarded as amongst our highest authority; whilst at the same time no one can positively determine whether he was or not a practitioner of medicine. Be that as it may, I think he has been too *lavishly* extolled; and yet there are numerous portions of his writings which are well worthy of attentive respect in the present day: whatever writers may have intervened between Hippocrates and Celsus, few of any note have reached us; and on the particular subject that our essay involves, not much is to be gleaned from him; yet enough, I think, to evince that whether practitioner or merely an *amateur*, the disease of croup was not a stranger in his time. As GRIEVES has given us a translation of his writings, which has been always well esteemed, I shall quote from his edition of 1756, rather than from the Latin, as by a comparison of it and the original, he appears to me to have very fairly given the sense of his author.

At page 56, among the symptoms of death in disease, he says, “and it is impossible to save that person, who labouring under a fever *without any tumour*, is suddenly, as it were, strangled,” &c. At p. 63, among the signs of *particular* diseases, he remarks that “those whose breath is greatly straitened, in passing through the fauces in fever, will soon fall into convulsions. If an *angina* suddenly disappears, the distemper is removing into the lungs; and that is often fatal before the seventh day.” At p. 77, he strongly recommends bleeding in “whatever strangulates the fauces, so as to cause a difficulty of breathing;” and in cases where the body “may seem hardly able to bear it,” yet it is often to be employed, as “when an *angina* suffocates.” Speaking of *angina*, p. 189, “as the former kind of distemper, (*tetanus*,) afflicts the whole neck, so there is another *common* one, *equally dangerous and acute*, the seat of which is in the fauces. Our authors call it *angina*: among the Greeks, *the name varies* according to the species; for sometimes there appears *neither any redness nor tumour*.” “There is also a disorder about the fauces, which amongst the Greeks, *has different names*, according to its different degrees. The *whole* consists in a *difficulty of breathing*: but while it is *moderate*, and does *not wholly* suffocate, it is called *dyspnœa*; when it is *more severe*, that the patient cannot breathe *without a noise*, and quick fetches, *asthma*; when the difficulty is so great that respiration cannot be performed, *unless* the neck be kept erect, *orthopnœa*. The first of these may be of long continuance without endangering life: the *two following are commonly acute*.” p. 191.—Is *asthma* now reckoned among acute diseases? Is it not deducible that from this great generalization of subjects noticed by most ancient writers, it is almost impossible to draw therefrom correct, particular conclu-

sions! Sufficient, however, appears in the above few quotations to render it probable that at least a part of his remarks are applicable to croup alone.

ARETÆUS, who flourished about eighty years after Celsus, is the next author from whom I shall derive a few remarks. It is greatly to be regretted that the writings of this observant physician should have reached us with many imperfections. From what we have, we have much reason to deplore the loss our science has sustained in many parts of his works, but I apprehend enough is left to vindicate his knowledge of croup. MORFAT has so well translated this estimable writer, that I shall employ that in preference to the original.

In his history of *acute* diseases, p. 10, he gives us an account of *angina*, or a suppression of breathing, in which there is great conformity with what I have already quoted from Hippocrates; at p. 12, he states *angina* to be the *synanche* of the Greeks, and says that “in some,” p. 14, “the disease communicates easily with the lungs, but those *die from metastasis*, or the change which ensues.” The *velocity* of the disease, as described at p. 15, corresponds rather with that of croup, than with the other well known forms of anginose affections.

Some of his observations on ulcers of the tonsils, at p. 22, apply I think in part at least, to croup, for it can scarcely fail of being remarked by every reader, that in the accounts given by all the ancient writers, there is a frequent intermixture of the symptoms of different species of *angina*, which, whilst the *whole* suffice to point out their knowledge of the disease *under all its forms*, particular symptoms do, nevertheless, apply rather to one than to another variety. In speaking of the *cure* of *angina*, p. 298, he says there are two species, one of which “consists in a collapse of those parts, (the tonsils, tongue, gullet, and *adjacent parts*,) and *internal* compression attended with a *greater degree of strangulation*, so that the *internal inflammation* seems to reach as far as the heart. It is necessary to obviate this last, as soon as possible, because it *very soon proves mortal* to the patients.”

He recommends venesection, “and that the aperture ought to be made large, in order that the blood may flow copiously and with ease; this will not be sufficient to allay the heat, but the strangulation will be mitigated, and all the symptoms diminished thereby, and will be of no small service to bring the patient to a *deliquium animi*.” It may be noticed that he disapproves of the operation of tracheotomy in *angina*, p. 303.

At p. 152, mentioning those affected with empyema, he adverts to the pus evacuated, which, “whether it passes upwards or down-

wards, the colour is various, smooth and equal, rough and unequal, with *small pieces of flesh* floating in it, of a *round* or *broad* appearance, which are either easily separated or adhere firmly;" and under abscess of the lungs, p. 156, "at times likewise, *parts of the artery and fragments of the lungs* are spit out."

Under *asthma*, p. 158, he says, "if a difficulty of breathing is produced, either from running, excessive exercise, or *any other cause*, it is denominated asthma; *that disease* likewise known by the name *orthopnœa*, is called asthma." Such is the vague account given of difficult respiration, and so mingled are their ideas on the subject, as to evince that a sufficient distinction was not always made with respect to different diseases having symptoms in common.

He speaks of diseases of the columella or uvula at p. 304, some of the affections of which "*easily suffocate* and put a period to life; of this nature are those which we call *uva* and *columna*, both of which exist with a degree of inflammation, thickness, and elongation, so that they *hang down into the artery*." Such diseases are, I believe, not known at the present day. If they are not, therefore, now extinct, it is not improbable that they may have some connection with the croup of our times. But we must leave this author now to speak of Galen, the best and ablest commentator on Hippocrates, and by far the most distinguished physician of ancient or of modern times. When we consult the works of this great man, estimating at the same time the comparative paucity of his means of improvement, they cannot fail of impressing on the mind the highest veneration for his extraordinary talents and extensive attainments. Whilst they have received a due respect from most foreign nations by whom medicine has been cultivated, is it not surprising that an English edition of his works have never been thought necessary! Notwithstanding the extravagant and absurd opinions contained therein, I am persuaded that an abundant harvest might still be reaped therefrom; and that he requires only to be known, in order to be admired, and to demonstrate that the high standing he attained, and so long maintained in the ranks of medicine, was in all respects deserved.

My extracts from the works of this extraordinary man, (who, in my opinion, far more deserves the title of the father of medicine, than he to whom it is so commonly given,) are taken from the folio Basil edition of 1551.

At p. 692, *Lib. de Caus. procatart.* we have an ample detail of his views of catarrh, which may be regarded as an extension of those of Hippocrates; from this I shall make a few extracts as explanatory of his principles respecting a disorder so extensive in its character as

to be the substratum nearly of the science of medicine during many succeeding centuries.

“Deinceps autem *de fluxionibus* a cerebro oriundis aliquid etiam dicamus. Destillationis igitur & gravedinis, (hæc coryza, illa Græcis catarrhus dicitur,) cerebrum causa existit.”—“Ac defertur quidem fluxio à Capite nonnunquam in ventrem, nonnunquam in *Asperam Arteriam*, utrilibet maximè nocens.”

In his treatise *de tumoribus præter-naturam*, p. 706, we have his speculations on the formation of phlegmon and abscess, and we soon perceive that *Apostema* is a word of vast import and extensive signification among the ancients. I advert to it, merely, however, as it enables me to say, that from the erroneous views of *suppuration* given, we may perhaps be able partly to explain why they never, (or rarely,) saw, in *matters discharged from the trachea*, any other than *supposed* pus, or the *lining membrane* separated by suppuration. Some humour or vaporous spirit, says Galen, arising either in the affected part, or falling on it from elsewhere, collects in a particular place, and there corrupting, at length excoriates the neighbouring bodies, and destroys them, and, (in the *latter case*,) “*aliquando variorum tum humorum, tum solidorum Corporum figuras exprimunt*,” which inter alia, may not unaptly be supposed to apply to the membrane of croup. This is rendered more probable from p. 727, *De locis affectis*, where he affirms that the kind of matter discharged, indicates the part affected, either as being “*ex essentia illius, vel quod ab ea contineantur*. *Positus etiam affectam partem commonstrat*. Durus quippe in dextra præcordiorum parte tumor, non lienis, sed jecoris affecti est nota: in sinistra autem, non hepatis, sed splenis affectum indicat. Ad hæc, *si membranosa tunica frustulum vomendo fuerit rejectum, aut gulæ, aut ventriculi; si tussiendo, gutturis, aut Asperæ Arteriæ: si excreando, faucium*,” &c. Now what are these frustula of a membranous coat, discharged by vomiting or coughing, and indicative of affection of the trachea, if not appertaining to croup?

In his books *de difficultate respirationis*, we have reason to believe that much is applicable to the circumstances of croup. To introduce all that I had extracted, as relevant to the subject, would too greatly enlarge my quotations: I must content myself with a very small part. “In orthopnœa etiam, (quæ erecta cervice spiratio est, fitque collectis viscidis & crassis humoribus *circa Asperas pulmonis Arterias*,) & similiter ubi *circa pulmonem* aliquid induratur, aut *tuberculum gignitur premens atque coarctans ipsam arteriam asperam*, parvus, densus, veloxque spiritus redditur,” p. 494. “*Aliquando autem, licet rarò, est visum in uno eodemque homine simul intercipi utran-*

que, nimirum a collecta in arteriis asperis tanta humorum colluvie, quæ suffocare animal posset," p. 496. "Cæterum coarctationis in Arteriis asperis, tumores præter naturam declaraverim reos," id. "Cæterum omnes qui ob talem coarctationem sufficienter inspirare non possunt, stertorosam faciunt respirationem, & in suffocationis discrimen veniunt, si decumbant," p. 503. "At vero Anhelosa respiratio oritur aliquando quidem in affectibus multa inspiratione indigentibus"—"Et quando obturatio, aut compressio, aut coarctatio, instrumenta respirationis infestat," p. 505.

"Colliguntur autem in asperis arteriis id genus succi, vel per destillationem a Capite, vel ex pleuritide, vel peripneumonia, vel pulmonis affectu, vel angina, vel ex translato pure," &c.—*Lib. de pulsibus*, p. 588.

"Cæterum illos humores qui in arteria contumaciter hærent, et qui difficulter expectorantur, magis evellunt Sternutamenta."—*Lib. de Symptom. Caus.* p. 679. "Porrò quicquid spiritum interceperit, id tussi rejicere oportet: sive humor fit a Capite defluens, sive illapsa portio cibi vel potus, sive aliquid in asperis arteriis collectum, ut in peripneumonia, pleuritide, & in connexarum jecinoris partium phlegmone, aut in gutturis ipsius asperitatibus." *Idem*.—In *Liber de locis affectis*, p. 752, the subject of *angina* is taken up, of which I shall only repeat what is said of the second variety. "Ubi nec fauces, nec reliquæ oris partes, nec etiam externarum partium ulla inflammata videtur: laborans tamen suffocationis periculum in gutture sentit."—"Cæterum cum gutturis musculi interni inflammantur, Angina is affectus dicitur, quæ simul et vocem et spirationem lædit. Idem quoque in universum facere solent omnes præternaturam tumores, sive in spiritalibus viis exoriantur, sive extrinsecus ipsas comprimant," p. 755.

"Similiter solent respirare et ii, quibus asperæ pulmonis arteriæ plurima defluxione opplentur," p. 756. "Si verò stertendo strepitum fecerint, lentorum, crassorumque humorum pertinaciter impactorum multitudinem, pulmonis bronchia molestare est indicium," p. 757. "Nonnunquam verò et pulmonis aliqua pars, aut Crustula simul efferri videtur," p. 758. Under *Orthopnæa*, p. 1246—"Restant autem adhuc affectiones duæ, quæ Angustiam locorum faciunt in viis per quas aër inspiratur: quum aut humorum crassorum & viscidorum multitudo pulmonis bronchiis fuerit impacta, aut tumor abscessui similis in ipso constiterit," &c.

But we must leave Galen, and proceed to COELIUS AURELIANUS, who lived about two hundred and thirty years after our Saviour—and not more than thirty or forty after the time of Galen. I need scarcely

say, that his work *De Morbis Acutis & Chronicis*, has always been regarded of high authority, and been held in respectful estimation. I quote from the 4to Amsterdam edition, of 1622. In the third book of acute diseases, he treats of *Synanche*; without following him in the etymology and synonymes of the word, I proceed to mention the “*Differentia*,” p. 179.—“*Synanches igitur alia est sine manifesto indicio, alia cum visibili atque manifesto: et alia intra oris spatium, alia exterius, alia ex utroque hoc, exteriore atque interiore, parte dextra vel sinistra, aut in utraque. Denique quidam specialem discretionem etiam nominibus posuerunt, ut Valens physicus libro tertio curationum. ¶ Eam igitur quæ sine manifesto tumore est, sine nomine reliquerunt. Eam verò quæ cum manifesto, si in utraque parte, (faucium,) interiorum fuerit, cynanchen vocandam.*” He proceeds to notice the other varieties, and then adverts to the antecedent causes of cynanche, among which he enumerates catarrh—stating that men are more affected than women, and of those, youth and middle age rather than boys and old men—next gives ALCLEPIADES’ definition, which he considers as defective, and coincides with that of SORANUS, viz. “*Synanchen difficultatem transvorandi atque præfocationem acutam ob vehementiam tumoris faucium.*”—“*Adjecta est, (says he,) autem transvorandi difficultati præfocatio celerrima, sive acuta, ad discretionem tumoris tonsillarum sive uvæ,*” &c. And after making some further remarks on the necessity of *tumour* to *synanche*, he terminates thus, “*Est enim ipsa quoque acutissima, atque celerrima præfocatio, sed non ex tumore descendens.*” The whole chapter indeed is deserving attention.

In the next chapter, p. 182, after describing the symptoms of *synanche with tumour* in all its stages, he proceeds to give us those of that terrible one that occurs *without tumour*, in which I think, those acquainted with croup will see strong evidence of its being that disease that is described—“*Atsi sine manifesto tumore fuerit passio, sequitur collorum tenuitas, cum extentione atque subrectione inflexibili. Item vultus & oculorum cavitas: frontis extensio, color plumbeus, spirationis difficultas plurima, nullo, ut supra diximus, manifesto tumore, sive inflatione aliqua apparente, neque in internis, neque in externis partibus, hebetudo plurima, atque imbecillitas ægro tantis: & celerrimus, vel acutus cum præfocatione, mortis effectus,*” &c.

In the 4th Chapter, he mentions and animadverts on the treatment of this disease by the chiefs of other sects. Of these, Hippocrates comes in for his full share: thus, the recommendation of bleeding from the veins of the neck, is objected to, especially when the disorder is

sine ullo manifesto tumore, because of the necessity of a fillet, to raise the veins, which undoubtedly he tells us will augment the suffocation. When animadverting on Asclepiades, who claims, I believe, laryngotomy as his discovery—Cœlius, (an *Ishmael* in medicine,) says, p. 195—“*Est etiam fabulosa arteriæ ob respirationem divisura, quam laryngotomiam vocant, & quæ à nullo sit antiquorum tradita, sed caduca atque temeraria Asclepiadis inventionione affirmata,*” &c.

I shall now leave this author, remarking however, that something on the subject of our inquiry, may probably be derived from his chapter, *De Suspirio sive Anhelitu, quem Græci Asthma vocant*, at p. 429, part of what I have already quoted, seeming fully sufficient to prove that the croup was not unknown to him.

Leaving several intermediate writers, as RHazes, &c. in whom, however, I think I discover a knowledge of the disease in question, I proceed to AVICENNA, who flourished about the year 1000 of the Christian Æra.

The edition from which I quote is the *Juntas* edition at Venice, 1608, folio, 2 vols. At p. 92, *De Ægritudinibus compositis*, he gives us this pretty comprehensive view of *catarrh*: “*et omne quidem Apostema quod causam non habet manifestam, et ejus causa corporalis monstrat materiam de uno membro ad aliud, quod est sub eo, fuisse mutatam; vocatur catharrhus.*”


De Suffocationibus, p. 611, “*Et omne apostema præfocativum aut interficit, aut permutatur materia ejus, aut collectionem facit, & suppuratur. Et quandoque apostemantur interius cannae, (Trachea) sed non pervenit ad hoc, ut præfocet. Et præfocativum malum faciens necessarium, ut sit assiduatio apertionis oris & projectionis linguæ nominatur caninum.*”—“*Et quandoque permutatur synantia ad peripneumoniam, quando expellitur materia ad pulmonem.*”—“*Et omnis synaticus qui moritur, spasmat imprimis. Et præfocatio quidem canina quandoque interficit inter primum diem & quartum. Et quandoque multiplicantur synances, & earum similia, in vere hyemali. Quum ergò præfocatio fortior fit, & fit necessarium multoties movere,*” &c. Compare also the annotations to this chapter at p. 611, referring to Hippocrates, Galen, Paulus, Trallian, Celsus, &c.—*De Signis*, p. 612, “*Omnibus speciebus præfocationum, est constrictio anhelitus.*”—“*Et illud est malum, quod est intus in epiglotti, & non apparet sensui exterius ex eo aliquid, neque interius, quum inspicitur ejus guttur, sed est profundum,*” &c. “*Et jam dictum est in signis mortis velocis, quod si quis præfocationem patitur, & alteratur color a rubedine sua consueta ad albedinem, aut ad viriditatem, tunc ipse moritur in uno duorum dierum,*” &c. At p. 614,

bleeding is strongly enforced in every species of strangulation, every ten hours to the third day; and also as a preventive of synanche in those accustomed to it.

De Signis Anhelitus, p. 627, “Et quandoque Constrictio est ex humiditate in Canna, (Trachea,) & quæ sequuntur ipsum & est cum signis in anhelitu, *sonus ejus qui stertit*, & est necessitas excretionis.”—“Quum ergò advenit *constrictio sterilis (subito, tunc jam cucurrit ad pulmonem,)* materia ex catarrho, aut currit ad pulmonem prius, deinde ad cannam, secundo, sanies, et pus, ex aliquo membrorum subito.” Page 628, “Et ejus Causæ, (constrictio anhelitus,) aut sunt *apostemata* in illis meatibus, quæ sunt epiglottis & Cannæ, & rami ejus, & arteriæ.”—“Humores plurimi in ipso, aut grossi, aut viscosi, aut aquosi aggregati in pulmone,” &c.

I must mention that here, as elsewhere, much of the force of the quotations is often weakened by the disconnected form which brevity compels me to employ.

“*De Asthmate*, p. 630, & seq. “Et quandoque est in Canna pulmonis.”—“Et multoties permutatur ad peripneumoniam.”—“Si fuerint causa asthmatis humores, aut humiditates in Canna ipsa, erit illic constrictio in principio anhelitus cum exscreatione, & cum sputo rei ex loco propinquo. Et si fuerint humores *ex catarrho, erit subito*; & si non, erit paulatim.” 633. “In asthmate autem et constrictione anhelitus factis propter catarrhum, oportet ut laboretur cum cura prohibente catarrhum, & faciente spuere quod aggregatum est.”

P. 640, *De signis tussis & sputi Sanguinis*, “Et signa ejus, quæ sit ex ulceribus, sunt signa, quæ dicuntur in capitulo ulcerum pulmonis, ex sputo *crustarum*, aut puris, aut *frustorum* Corporis pulmonis, aut *annulorum* Cannæ: et ejus esse, est *post catarrhum* (mordicativum,) & post sputum sanguinis & apostemata.”  What are we to consider these frusta pulmonis & annuli Cannæ?

De peripneumonia, p. 654, “Est apostema calidum in pulmone, & ipsa quandoque accidit incipiendo, & *quandoque sequitur eventum catarrhi descenditis ad pulmonem, aut præfocationes* resolutas ad pulmonem, aut pleuresim conversam ad peripneumoniam, & hujusmodi interficit usque ad septem,” &c. Now here we see a distinction drawn between peripneumony as an original disease, or as the termination of catarrh or pleurisy. A common catarrh simply, is rarely followed by peripneumony, but it is not unfrequent after croup.

Passing downwards to PLATERUS, about the year 1490, we find the same doctrines maintained; and in his treatise *de respirationis defectu*, he states, “Interdum catarrhum comitem habet spirandi difficultas: in quo & nonnunquam *respiratione omni subito intercepta, suffocantur*;

diciturque hoc malum catarrhus præfocans aut suffocans.” It may be questioned from this very slight account, whether it applies to croup or to pertussis; and this doubt is strengthened by his equally confounding together, at p. 429, asthma and cat. suffocans. “Obstructio pulmonibus intrinsecus, in asperæ arteriæ ramis, per pulmonum substantiam disseminatis; quia tunc aeri liber transitus interclusus est, difficilis sequitur respiratio. Hoc autem frequenter ab humore pituitoso aqueo, a capite, præsertim, dormientibus & recumbentibus, sensim sine sensu manifesto, per asperam arteriam ad pulmones defluentes prodire solet; qui in ramis illius angustioribus subsistens, & mucositatem acquirens, suæque visciditate vias obturans, respirationem cum stertore & stridore, tussique aliqua, difficilem parit. Etsi propter tenacitatem excreari nequeat, affectum diuturnum, asthma appellatum facit, qui & nova accedente defluxione, cotempore cum hic fit, ut noctu præsertim, & tempore humido, ac post crapulam, suas habet exacerbationes. Et si *defluxio* magna copia, *subito* vias jam prius occupatas, impleat, catarrhum suffocantem dictum efficit,” &c.*

It seems almost useless to multiply quotation on quotation in proof of the positions I have taken. I will remark, however, that I have copious extracts from the writings of most of our principal authorities down to about the commencement of the last century. Most generally they make catarrh of the same importance as does Hippocrates, deriving it from a distillation of the brain, and falling upon distant and different parts, thereby producing a host of diseases, whose pathology is now very differently explained. I have already mentioned Van Helmont as first opposing with the weapons of irony and sarcasm, united with those of sound reason and judgment, this monstrous abortion of the “Father of Medicine,” and as the doctrine of catarrh will be more fully unfolded by a short quotation from his writings, I need scarcely apologize for so doing; and although there is a terseness in the Latin of Van Helmont, not adequately expressed by the translation of 1662; I shall, nevertheless, employ the latter, for fear the original may be altogether disregarded. His fifty-seventh chapter is entitled *Deliramenta Catarrhi*, which his translator has rendered “the toys or dotages of a catarrhe or rheume.” The very com-

* Do we want further evidence of the uncertainty of names, as descriptive of specific diseases among the ancients, let us hear what Sennertus says on asthma and orthopnoea, p. 451, “asthma, Latinis anhelatio, *etsi interdum in genere & amplo vocis significato, pro quacumque respiratione difficili & anhelosa quacumque de caussa profecta, sive cum febre, vel sine febre accipitur*. Stricta tamen vocis significatione Hippocrati est *πνεῦν*, hoc est frequens seu densa & difficilis respiratio sine febre,” &c.

mencement of which shows the temper and intention of the writer. "It is now a seasonable time to show, (says he,) that the great heap of diseases which hath been dedicated to a catarrhe or rheume flowing down from the head, even into the very top of the toes, without let or hinderance, is an old wives fiction, not invented but by the enemy, the troubler of mankind," &c. Subsequently he goes on to say—"Thus indeed do the schooles season their young beginners, theorically and practically. For so rheumes are guilty of the defects of the eyes, ears, jaws, tongue, teeth, breast, armes, loines, and legs. So coughs, consumptions, asthmaes, plurisies, peripneumonies, apoplexies, palsies, sudden deaths, corrupt mattery imposthumes, spitings of blood, have found their already supposed cause in rheumes. So in the next place, the stomach casts up its vomit, loatheth, labours with an unconcoction, the liver also, and the spleen are ill at ease. For an undigestible snivel having slidden down out of the head; obstructions, hardnesses, dropsies, aposthems, schirrus's, fevers, wringings of the bowels have taken up their room among catarrhes, their clients." Proceeding in this manner for some time, he goes on to say, "The which, (vapour,) seeing it ought naturally to flow down, it suggests an ample and general matter for catarrhes or rheumes. The which if it fall down into the eyes, ears, jaws, teeth, &c. the parts do deservedly grieve, that they have a neighbour brain and a superiour tyrant: but if it rain down into the lungs, they are transchanged into a cough, shortwinded affects; next into a consumption of the lungs, beating of the heart, and so also into sudden death. But if indeed, these rheumes do rain down into the stomach; now he paie the punishment of their fault by unconcoction, crudities, vomitings, inordinate appetites, stomach paines, faintings, obstructions, fluxes, coeliack passions, cholers, colicks, consumptions for lack of nourishment, dropsies, scirrhus's, and all defects of the belly; yea fevers, putrifyings in the veins, also affects of the spleen, stones of the reins and bladder, do draw their beginnings from the muckiness of a catarrh. But if catarrhs do derive themselves into the bosome of the cerebellum or lesser brain; now suddain death, the apoplexie, and palsies are at hand. But if by chance of fortune, rheums do divert themselves thorow the nucha, or marrow of the back-bone, into the sinews, arteries, muscles: divers joynt-sicknesses, plurisies, palsies, and convulsions of the parts do presently happen. And likewise, they will have rheums to beget chyrurgical defects of pains, apostems, and the divers offspring of ulcers. But if they do not fall down, and the brain doth ease itself of its burden, by poses and coughs; the drowsie evil, the coma or sleeping evil, the catochus or stiffe-taking disease,

the lethargie, giddiness of the head, apoplexie, losse of memory and the senses, are present. For truly, besides the aforesaid distemper of heat and cold, and a catarrhe of necessity bred from thence: the books, speeches, counsels, conversations, chairs, and practises of physitions do re-sound nothing: and so the whole hinge of healing is at this day conversant in purgings, cuttings of a vein, scarrifyings, baths, sweates, cauteries, and in summe, not but in the diminishments of the body and strength, or dryings up of rheumes.”

This is surely enough to awaken our astonishment at the extensive generalization made by the ancients, from one simple word *catarrh*! a word implying merely a flow or fluxion, derived from the Greek *καταρρος*, and which SENNERTUS has largely expatiated on at p. 242, vol. 2, folio edition of his works in 1641, of which I shall only say that he tells us, that two words principally occur by which we express the motion of præternatural humours in the body. The most general is “*ρευμα & ρευματισμος*, fluxus seu fluxio, quæ vox omnem motum *cujuscunque* humoris *e quacunque* in *quacunque* partem nostri corporis significat,”—whilst *καταρρος* “*CELso* destillatio, Græcis etiam alias *κατασαρμος*, *tantum* humoris supervacanei *e capite* & præcipuè cerebro in alias partes prolapsum & defluxum significat.”

I need scarcely apologize for the extent of these quotations, for it seems absolutely requisite to comprehend a word of such extensive bearing in all the points of view in which the ancients have presented it, if we wish to unravel the intricacy in which the disease that we are investigating, and indeed many others are involved; and whoever wishes fully to be acquainted with it will do well to consult SENNERTUS. A few observations of a much greater number collected from the writings of this physician, will probably add support to what has already been said. Sennertus may indeed among *modern authorities*, be considered as a kind of epitome of the ancients—for in few works will such a mass of matter be found in almost every department of medicine:—he was born about 1572 and died in 1637. I quote from the Fol. Ven. Edit. in 3 vols. of 1641. In his chapter, 2d vol. p. 240, *De Catarrho & Cerebri excrementis retentis*, we have a pretty full exposition of the doctrines I have adverted to, as derived from Hippocrates, and very generally adopted by all writers, down to and later than Sennertus; the evils it was supposed to produce by falling on particular parts, are enumerated; among others, if on the uvula, it produced staphylin; if on the *muscles of the larynx*, angina; if on the *trachea*, branchus, &c. &c. He adds moreover, soon afterwards, that this term *catarrh* has a triple sense assigned to it; either *generally*, for every flow of humour to *any* part of

the body—*more strictly*, for a flow of humours from the brain to the palate, mouth, and nose—or “*specialissime*,” on the palate, mouth, and lungs; so that catarrh implies, catarrh properly so termed, bronchus and coryza. “Branchus verò, est excrementorum è capite in fauces destillatio, *cum vocis obscuritate & rauedine*,” &c.*

I have already noticed that the ancients appear to have considered catarrh as sometimes producing ulceration; now, by duly attending to this fact, whilst perusing their writings, we shall probably be led to believe, that some at least of their observations imply, that the matter thrown up by coughing was *frequently* of this description. When *too thin*, (propter tenuitatem,) it could not be readily expelled by the cough which it so vehemently excited, “qua caput magis repletur, & periculum est ne pulmones exulcerentur,” and they point out in many passages, as Hippocrates has done before them, that a peripneumony was to be apprehended from an angina, on the seventh day; which will hold good of croup on many occasions (but not 'of common angina,) in its general result, if not early restrained in its advance to a fatal issue, through a determination to the lungs.

It may be remarked that the older practice in catarrhal affections was pretty active, of which indeed we have stated some authorities. Possibly, this early depletion may have checked the rapid advance of croup to a membranaceous and fatal termination on many occasions; whilst at the same time, the idea entertained of the *fluxio*, tending to the *jugular veins*, led them to look for *polypi* in them, rather than to the windpipe for a membranous exudation; which, if actually present or spit up by partial fragments, was esteemed to be the internal coat of the parts separated by ulceration, or actual pus, inspissated by remora, in the parts themselves; and in either way may have thus obviat-

* “Unde etiam tota Arteria, (trachea,) interdum dicitur Bronchos.” *Galen de Comp. Med. lib. 7*, 1240. Branchos and bronchos appear to have a very *distinct* meaning in the old writers—thus (Gesner, Greek Lexicon, fol. 1545, defines them) Βραγχος—raucesso, morbus cum guttur & arteria catarrho occupantur—but Βραγχος signifies the throat only, or guttur, or the whole aspera arteria, as Galen above explains it. When now we speak of *bronchia*, we certainly have not either the throat, (guttur,) or trachea in contemplation; but numerous instances show the uncertain meaning of many of their terms, as we shall again point out, all serving to evince the great importance of a just nomenclature. Had this been adequately attended to by old writers, it is probable that many difficulties might have been obviated, which now perplex the ablest commentators—not respecting croup alone, but likewise Lues and various other diseases. Thus, throughout all the old writings, whilst in symptomatology we find much to persuade us that croup was familiar to the ancients as at present, yet in name, owing to erroneous pathology, we do not recognise it by any synonyme.

ed the illustration, which a more perfect pathology now so luminously unfolds. Thus, as respects the *first* position, Sennertus merely conforms to the ancient practice, when he says, p. 249, “Si quando catarrhus *tanto impetu* ad pulmones fluit, ut suffocationis periculum impendeat, danda opera, ut materia in *plures partes statim distrahatur*, revellendo, derivando, catarrhus que sistatur internis & externis medicamentis exhibitis!” which treatment we may safely affirm to be of too energetic a nature to be applicable to a simple case of common catarrh;—and as regards the second position, we shall shortly evince its correctness by extracts equally derived from their writings; whilst at the same time, the erroneous theory which taught the distillation of the brain to go chiefly to the lungs, will probably explain, in part, why some of the symptoms of trachitis appear to be involved in the account of their pulmonary complaints.

When speaking of *coryza*, p. 332, Sennertus says, “Hoc saltem monemus, inter reliquas catarrhi species, levissimam esse quæ fit in nares, & *minus periculosam, quam quæ fit in asperam arteriam* vel pulmones;” in which we perceive a sufficient acknowledgement of catarrh infesting the trachea, distinct from other parts, as well as of its greater danger; but what catarrhal affection, except croup, is now admitted peculiarly to operate on that channel?

Diffuse as Sennertus is on the subject of catarrh, he is not less so on that of angina or cynanche, on which, following Hippocrates and Galen, after what I have already quoted from those and other authorities, it seems scarcely necessary to dwell. What he has said may be found at p. 369, and seq. It would seem, as before noticed, that Hippocrates, under the head of *Κυανγχι*, embraced all the varieties of the disease, whilst some made a distinction between it and *Συανγχι*; the former, particularly involving that species in which no tumour, &c. were present, but which often killed on the first day, or terminated in peripneumony if running on to the seventh. Galen contended that the disputes respecting the letters Σ and Κ were useless, and he also mentions, *Lib. de locis affectis*, p. 752, ed. before adverted to, that “Hippocrates *affectus omnes* qui cum spiratione difficili, guttur aut fauces infestant, synanchas, hoc est anginas appellat.” This therefore even enlarges and renders more difficult the subject, since it must of course embrace asthma and other affections impeding respiration. I much question, however, if he carried it fully to this extent. It is certain indeed that he drew a decided line of demarcation between inflammation of the *fauces* and angina, for, (6 epid. sect. 7,) he expressly says, “*Quibusdam verò faucium* inflammationes aderant, *aliis angina*,” by the latter of which, adds Sen-

nertus, “procul dubio anginam intelligit *inflammationem musculorum laryngis*,”—“vero inflammationem *faucium, partium aliarum vicinarum*,” &c.—now what is meant by *fauces*, is subsequently explained to be, “pars quæ gulæ & gutturi præjacet, & duo dictorum meatuum ostiola comprehendit. Imò, (adds Sennertus,) *φαρυγξ* etiam pro *larynge* & *summo asperæ arteriæ capite* accipitur, ut ita dum Galenus anginam per inflammationem *φαρυγγος*, seu *faucium* definit, *non solum* intelligenda sit, ea pars quæ gulæ & gutturi præjacet, *sed ipsa etiam larynx et ejus musculi*,” &c. p. 370, and he adds, p. 371, “neque enim omnis suffocatio angina dicenda est; alias enim & catarrhi suffocativi ad anginam reducendi essent, *sed ea saltem*, ubi *nullo in pectore vitio existente*, ob *faucium inflammationem suffocationis periculum imminet*,” &c. In following up the subject he adverts to the four divisions of angina, viz.; *Cynanche*, *paracynanche*, *Synanche* and *parasynanche*, of which the first, *Cynanche*, (*κυανγχη*) is the only one that interests us in the present inquiry, “cum inflammatio *in internis laryngis* seu *gutturis musculis* delitescet, & *neque intus, neque foris*, in cervice tumor apparet, unde etiam *latens angina* appellatur,” &c.

I have already frequently mentioned that every writer seems to acquiesce in this description of *Cynanche*, as originally given by Hippocrates. Now the different symptoms mentioned by all of them, apply *exclusively* to no case of angina or *cynanche* of the present day, *excepting* croup: and if we admit, that in conjunction with various other symptoms spread through their works on this particular point, it approximates that disease as nearly as an imperfect pathology would permit; then it would seem clearly to follow, that Hippocrates was acquainted with croup, and drew his symptomatology of *cynanche* from it. Had his anatomical knowledge of the parts affected, and his *post mortem* examinations equalled his unrivalled attention to the symptoms he has enumerated, we can scarcely doubt, that his description of it in its details would have been so perfect, that no other disease would have been more accurately discriminated. VAN SWIETEN in his Com. on § 783 of BOERHAAVE’S Aphorisms, has asserted, that Hippocrates, in no part of his works has ever employed the term *Synanche* or *parasynanche*, in which, as far as my observations go, I find him strictly correct; it follows then, that under *Cynanche* and *paracynanche*, he embraces *every possible variety* of anginose affection then known, and which I believe to be the same as at present discriminated; but his especial description of the former, (*Cynanche*,) seems to apply almost solely to the characteristic form of croup of the present day—the *latens angina* of some writers—and that men-

tioned by CÆLIUS AURELIANUS as “Eam quæ sine manifesto tumore, sine nomine reliquerunt.”

We derive further evidence of this, I think, from what Sennertus says under the *Signa diagnostica*, p. 371, 372, “præsente autem angina in quacunque etiam parte sit, adsunt imprimis duo; primò difficilis respiratio *citra aliquod thoracis ac pulmonis vitium*, ita ut sæpe & suffocationis periculum immineat,” &c. “Et quidem quo major est faucium & gutturis angustia, eò *periculosior* est angina,—Atque ita *χρῆται* à posterioribus Græcis in specie descripta, omnium periculosissima est & gravissima, quæ *intra unam diem*, plerumque intra quatuor jugulat.” *Hip. Aph.* 34, &c. Now, is any form of angina known to us except croup, that kills in one day, or even less, as reported by some writers?—“Neque enim tum parvitas mali significatur, quod nihil conspicui sese prodit, sed quia magnus dolor adest, & summa respirandi difficultas, significatur, tumorem in *internis gutturis partibus hærere*, ibique conclusum spiritui aditum præcludere, atque ita *subito strangulare*,” &c. This last part, adverting to tumour *adhering to the internal* parts of the throat, &c. seems to have a strong connection with the adventitious membrane of croup.

The treatment of the disease, as detailed by Sennertus, seems to have been vigorous from the commencement; such indeed, as probably, most generally to have arrested its progress in the incipient state, and thereby precluded a frequent chance of seeing it at that stage in which a membrane forms. This, together with the erroneous views possessed of the nature of the complaint, may assist in explaining, why it may have been frequently altogether overlooked, or when seen, to have been regarded as the result of suppuration in the parts, by which the internal coat of the trachea was supposed to be thrown off. Be this however as it may, evidence sufficient I apprehend exists, connected with what has been before mentioned, to prove the expulsion of a membrane to have been *frequently* noticed. As to the cure, Sennertus says, p. 374, “in omni angina *sanguinis missione* & evacuatione opus est. Estque *venæsectio optimum, præsentaneum & compendiarium* in hoc morbo remedium.”

I have already remarked, and am the more confirmed in my opinion from various passages of Sennertus and others, that the phlegm evacuated, was *very commonly* regarded as *pus* arising from ulceration of the trachea; although the statement satisfies me, that at least, on some occasions, it was of the membranous character of the discharge in croup; thus, p. 388, under “Vulnera & *Ulcera Asperæ Arteriæ*,” we read, “*Interdum etiam bronchia & cartilagine Asperæ Arteriæ tussi rejiciuntur*, quod tamen ex pulmonibus, *frequentius* accidit, rarò ex

Aspera Arteria, quæ durior est, quam ut vivente homine *tantam corruptionem* pati possit." And among the *causes* of asthma, p. 452, (which it will be remembered, served as a general title for every variety of difficult respiration,) we find, "*Eodem modo a crudo tuberculo oriri potest Asthma, non solum in Asperis Arteriis consistente.*" &c. Now, are we at present acquainted with asthma arising from such a cause, at least, as frequently as former accounts would lead us to suppose? If, however, the term asthma was really so general in its acceptation as to embrace *every kind* of difficult respiration, from whatever cause arising; then it may, without any doubt, be presumed to apply at times to croup, accompanied with the discharge of a membrane, and which is above denominated tubercle.

That *spasmodic* croup was familiar to them, under the appellation of *tussis convulsiva*, &c. I have no doubt. At p. 450, "*Partium autem, per quas aer transire debet, vitio putariorum, oris, & faucium, ut et trachæ angustias, difficilis respiratio, imo suffocatio interdum induci potest*"—"imprimis verò si *aspera arteria*, & *præcipue ejus caput seu laryngis rimula*, vel obstruatur, vel astringetur & coarctetur, vel a quacunque causa angustior reddatur." So also at p. 466, "*Tussis vehemens interdum suffocat, non tam re aliqua obstruente, quam iterata sine intermissione valida efflatione,*" &c.

Since asthma implied so much in the older authors, we are not to wonder at *infants* being considered as highly obnoxious to it, although we may well place many of the accounts transmitted to us of this description, as being truly cases of croup, for asthma in its legitimate acceptation, is not now a disease, that *commonly* occurs at that early period of life. "*Infantes* (says Sennertus,) *autem suffocat, nisi maturis auxiliis sistatur, & avertatur,*" p. 453, and in various other parts.

Without taking up time in detailing his remarks on the "*Differentiæ Vocis*," I shall merely state that amongst them are enumerated the *rauca* & *clangosa*; the former of which he explains by "*quæ fit à membrana, quæ laryngem & asperam arteriam investit, præternaturam affecta, exasperata, & inæquali reddita,*" &c.; of the latter he says it is "*sub-rauca, sed acuta ferè & sonora, qualem pleraque animalia, quæ collum habent oblongum, ut grues, edunt,*" &c. p. 463. |

Speaking of cough, (De Tussi, p. 466,) he says "*Posterior verò accidit, ubi in respirationis instrumentis, humor hæret, qui ejici non potest, vel quia ob lentorem & crassitiem, bronchiis pulmonis nimis tenaciter adhæret.*" He, as well as others, frequently mentions worms coughed up, which I am disposed to think were in some instances, portions of membrane, whose origin being so imperfectly com-

prehended, as we have shown, it is not surprising that they should mistake them for worms, polypi, and other matters of a like description. There is at least no such description given, as warrants a full acquiescence in these discharges being worms.

In the third volume of his works, under the head "*De Infantum Curatione*," we have a chapter *De Catarrho, tussi & difficili respiratione*, p. 215, wherein he says "Excrementitii ergò hi humores, si per nares evacuari non possint, in *asperam arteriam delabuntur*, & tussim excitant"—"an verò difficultas respirationis fit ex materia à capite descendente, an verò ex sanguine pituitoso, è venis ad pulmones adscendente, cognoscitur ex eo, quod si a Capite descendit, catarrhus & simul tussis adest, & inter respirandum *stertor* quidam ac sonus percipitur"—(here it is seen that a marked distinction is drawn between catarrhus & tussis.) "Catarrhi hi & inde sequens tussis, ac difficilis respiratio in infantibus, non negligenda sunt, cum tusses non solum vigilias, &c. &c. &c. inducere, immo catarrhi suffocationem & mortem adferre possint." Can such strong cautions apply to common colds and coughs, even in children; are they not strictly referrible to the attacks of croup?

From the above abstract given of Sennertus's prolonged observations on catarrh, angina and sundry affections therewith connected; I cannot but think I have indisputably established the fact that croup was not unknown to him and his predecessors! However imperfect or incorrect their theories may have been, many of the symptoms noticed are scarcely applicable to any other disease than croup: and although much of what is quoted must be received with caution, on a question of the nature of that we are considering; especially as the *whole* is not exposed to view, by which much connecting strength might be added to our remarks; yet I cannot for a moment doubt, that under some of the diseases mentioned, croup has borne a very conspicuous part; shrouded, however, as I have repeatedly stated, by the extravagance of the old opinions, and probably from a less frequent autopsy than now prevails.

My further remarks are given without any particular attention to the times of the authors from whom they are extracted; but I shall give them chiefly from those whose writings are anterior to 1700, so that they may be considered as being previous to those, for the most part, who have been regarded as giving the first admonitions of the disease.

It would be urging too greatly the kindness of my readers, to press upon them the mass of materials I have collected on this subject, which I regard as bearing closely upon it; I shall therefore princi-

pally refer to the authorities in question, and the pages in which I think the subject is illustrated; thus, in PROSPER ALPINUS, an author of about 1600, we find much to dwell on, in his treatise *de Medicina Methodica*, lib. 7. cap. 10, entitled “*De Medicamentis ad gutturis phlegmonem, quam Anginam vocant*,” wherein we discover reference to croup in a manner scarcely to be disputed. His distinctions between the *external* affections accompanied with tumour, and the internal, are highly deserving of attention, as are also his observations in the treatise “*de præsagienda vita & morte ægrotorum*,” cap. 8. p. 251, Leyd. ed. 1710, headed, “*Quid bene & male spirare in morbis significet*,”—so also in other parts, as p. 419, 422, 509, &c. when speaking of the matter ejected he says, “*In pleuriticis pulmonis, ac vel etiam in Astmaticis, quod projecit non possit, stertorem ac ebullitionem inducit, sæpeque suffocat, aut empyema facit*”—“*rotunda vero, quæ tussi excernuntur, fieri ab humore crasso, & tenaci in fibris pulmonis collecto, atque a calore insigni, Galen. in lib. 6. Epid. tradidit; addimus formam rotundam, quod glutinosus humor, in Arteria Aspera contentus, eandem cum illo formam acquirat, siquidem ipsa globosa est, & cavitate interiore in orbem circumducta*,” &c.—At p. 532, “*Quid in morbis acutis Cerebron significet*,” we may also find ample subject of reflection, whether much of what is said may not be deemed applicable to croup.

FERNELIUS, lib. 5, of his pathologia, cap. 9, affirms, that he had, (*sæpe vidisset*,) seen angina kill in *eighteen hours*; and P. POTERIUS Op. om. 1698; confirms what has been before said, that “*omnis respirandi difficultas, asthma appellatur*,” p. 301.

HORSTIUS adds his weight to the distinctions of angina in the following terms:—“*Gravis est illa species anginæ, cum gutturis interni musculi sic inflammantur, ut neque in faucibus, neque in cervice, quidpiam appareat; unde Celso merito pestiferum acutumque morbi genus, Galeno morbus extreme peracutus, Hippocrate vero lethalis dicitur*.” Lib. 3. de Morb. pect. Obs. 1.—At p. 457, Epist. *Asthma lethale*, after death, all appeared sound in the lungs, but “*post asperam arteriam secundum longitudinem dissecuimus; & ecce! quod visu mirum fecit, quam prope meatus pulmonum, per quos aër ad calorem nativum eventilandum attrahitur, carunculae quamplurimæ nigræ, in modum parvarum glandularum, fabarum & pisorum magnitudinem nunc æquant, nunc excedentes, inventæ sunt*,” &c.

FABRICIUS AB AQUAPENDENTE, op. chirurg. Leyd. 1723, (he was born 1537, and died 1619,) has in his forty-fourth chapter on Tracheotomy, (de perforatione asperæ arteriæ,) in angina, many passages which seem applicable to croup, which, however, I shall not

repeat. In one part of his work on angina, he recognises it as arising of itself, or as *succeeding* to other diseases, as catarrh, &c. and he adds “*si internæ partes laborant, majus urget periculum suffocationis, quam si externæ.*” Under tussis, asthma, catarrh, &c. evidence may also be acquired.

FABRICIUS HILDANUS, a cotemporary, has, (Op. om. cent. 3. obs. 10,) under “*De periculoso catarrho suffocante,*” given us a case which is worth transcribing, and which, I scarcely think any one will object to as a decided case of croup of the strongest character, in a child of two years old, in 1608.

“*Circa 13 Julii, catarrhus copiosior in fauces & circa asperam arteriam defluere incipiebat.*”—“*Difficultas tamen respirandi ita aucta fuit, catarrhusque tam copiosè ad fauces decumbere cæpit, ut 14 Julii, circa vesperam, stertor aliquis circa fauces asperamque arteriam perciperetur. Cœnavit tamen pro more: sed quia difficultas spirandi & stertor singulis momentis augebantur, eadem nocte nobilis iste vir ad me misit,*” &c. “*Catarrhus tam copiose ad asperam arteriam defluebat, ut singulis momentis suffocationis metus adesset: & medicamentis quæ miseram, uti non posset. Confestim itaque ad me remisit nobilis, petiitque ut eaqua fieri posset diligentia ipsam adirem. Sed antequam pervenirem, puer jam maximis cum doloribus & cruciatu suffocatus fuerat.*”

A kind of chronic croup is detailed in obs. 22, in a man of thirty years, “*Vix credas, quanta fuerit tussis vehementia, atque asperitas, cum tanta raucedine, ut tandem loquelam vix proferre posset. Non tantum autem materiam purulentam, viscosam, et fœtidam, cruori permixtam tussiendo copiosè excernebat, verum etiam lapides infinitos,*” &c.

MARCUS SEVERINUS, (Libri tres de efficaci medicina, 1646,) explains in some measure, I think, the cause of not more frequently noticing the membrane in croup, by what he says of CÆSALPINUS, “*Qui lib. 2. Quæst. med. 12. demonstravit suffocationem in angina fieri magis oppletis venis jugularibus, quam clauso laryngis osculo. Quod si verum est, ut equidem puto verissimum,*” &c. Now, this opinion would necessarily lead in post mortem examination, to a place different from that of the disease.

J. HEURNIUS, a celebrated author about the close of 1500, in his treatise *de Morbis humani Capitis*, under catarrh, from p. 329 to 346, the whole of which deserves perusal, has many passages which appear to indicate croup as being known to him; I must be satisfied, however, in thus referring to his works generally.

BARBETTE, (Op. om. med. & chir. Geneva, 1688,) has much also
No. V.—Nov. 1828.

(under de affectibus colli, & angina,) evincing that croup was not unknown to him. In the *prognostica*, he says “Angina nulla tuta; quantum minus tumoris, tantum periculi magis,” &c. and in a note “Tumor apparet in tribus aliquando anginæ speciebus, nempe, parasyanche, synanche, & paracynanche, non vero in cynanche,” &c. In the *prognosis*, he says “Angina perfecta nunquam periculo caret, nam aliquando primo die ægrum suffocat, sed ut plurimum ante quartum;” and he affords some useful remarks on the employment of bronchotomy or laryngotomy in the disease.

H. REGIUS, (medicina & praxis medica, 1668,) speaking of angina, “quæ est difficultas respirandi, ex inflammatione musculorum faucium, vel laryngis guttur nimis arctante, orta,” &c.

VIGIERIUS, (Op. med. chir. 1659,) agrees generally in the views of angina, with his predecessors; and he aids us in a knowledge of the parts spoken of in the following passage:—“Per fauces, (φαρυγγα Græci vocant,) internus oris locus, ubi tum gulæ, tum asperæ arteriæ extrema conveniunt, intelligitur; Per guttur quod λαρυγγα nominant asperæ arteriæ caput.” He also particularly adverts to the danger of the transfer of angina to the lungs, producing peripneumonia, &c.

JOHN VIGO, (The whole works of that famous chirurgion. London, 1586, black letter,) has a chapter “of an aposthume of the throte called Squinantia,” which establishes what I have already stated of the great import of *imposthume* in former times. “In the throate there is often engendred an aposthume of a catarrouse mattier commonly called of the olde doctours Squinantia. Cornelius Celsus calleth it angina, and it is a daungerous disease, causing the patient sometime to dye by suffocation or choking in the space of twelve hours, and sometimes of *seven*, or *four*, or *two*.”—Agreeing in the fourfold division of the disease by Galen, he seems to point pretty clearly to the peripneumonic and cerebral sequelæ which we see in croup, saying “if the matter turns to the lungs, it causeth difficultie of breathing. If to the heade, it reduceth the perturbations of the use of reason,” &c. His remarks are appropriate, and especially in regard to the treatment, in which venesection is particularly enforced. “All things must be done speedilie, for this disease suffereth not delaie,” &c. Other pertinent observations are to be found in his *chapter of remedies* for passions of the throat, at p. 410.

SYLVIVS, (Op. medica, Amst. 1679,) p. 212, *de aëris inspiratione læsa*, says “Viarum ad pulmones tendentium culpâ inspiratio aeris abolebitur, quando vel os & nares simul planè obturantur, vel larynx obstruiter, comprimiturve summopere in catarrho suffocativo dictâ, angina, strangulatione,” &c. “Idem accidit forsân, si ostium la-

ryngis crassâ, viscidâque pituita sit plus minùs obsitum," &c. "Abolita ob asperam pulmonum arteriam summè angustatam inspiratio aeris *pro incurabili habenda, ni* innox expiratione forti expellatur, quod illam replet, sanguis, pus, pituita, vel quidvis aliud," &c. Other observations might be quoted, but these are sufficient.

ETTMULLER, whose works were printed about 1590, has several observations, and even cases, spread throughout his writings, which appear to be connected with croup in no inconsiderable degree. I have already mentioned that he has opposed the absurd ideas of catarrh, as given by the writers who preceded him.

RAMAZZINI, (Op. Om. Lond. 4to. 1717,) has given a series of observations on the *constitutiones epidemicæ* of 1691, &c. wherein, (p. 90,) he adverts to the prevalent diseases, among which are apoplexy, pleurisy, peripneumony, catarrhi suffocativi, angina, erysipelas, &c. of which, "præ cæteris tamen affectibus morbi pectoris grassabantur magis, ac busta implebant." He adverts also to the common opinion entertained of catarrh, in which he elucidates the important, extensive, yet undefined nature of that disease, as handed down by the ancients; explanatory, in some degree, of the nomenclatural difficulties in the present period, of diseases probably equally well known and acknowledged by them as by us, under other appellations; and proving, that medicine, like other sciences, has been retarded or obstructed by the repeated changes of their names.

WILLIS, a writer of eminence, between 1640 and 1680, has given many excellent remarks on the subject of respiration. Among others he says, "Though there are many causes and ways whereby the passages of the trachea are wont to be obstructed, yet chiefly, and most often, a catarrhal distillation of the serum, while it departs from the blood, and flows out of the vessels bringing blood into these parts, which being first thin and sharp, produces a troublesome cough; afterwards thickening by digestion, and *cleaving to the sides of the trachea*, exceedingly straitens the ways of inspiration, and shortens them by quite stuffing up their extremities," &c. Pharmac. ration. p. 22.

"The passages of the trachea being sometimes more nearly contracted and closed from *their fibres convulsively disposed*, deny a passage to the air for due breathing. From hence, when there is no obstruction or ill conformation in the lungs, as also no consumptive disposition, yet from those fibres preternaturally convulsed and drawn together, dreadful fits of an asthma frequently arise. Besides these accidents of breathing hurt, there are certain others, which are stirred up by reason of the air prohibited in its first entrance, viz. in the

nostrils, the throat, the larynx, from a tumour, or ill conformation: for the polypus in the nose, the quinzey in the throat, or inflammation of the tonsils do render a difficult breathing."

In the following passage we see a strange mixture of right and wrong, which yet seems somewhat connected with the nature of croup.

"For seeing the blood emitted by phlebotomy, in rheumatisms, peripneumonies, and pleurisies, when it is cold, is covered all over with a thin skin, altogether of the like substance with those concreted polypus's, it *plainly appears* that it passes with difficulty through the passages of the lesser vessels by reason of those viscous excrements. Wherefore that it may pass by some means it distends them very much, and sometimes breaks quite through them; also it frequently unlocks their mouths, and opens gapes into the trachea, insomuch *that portions of the extravasated blood* are by coughing frequently ejected." p. 20.

"But for the reason aforesaid, a peripneumony not only succeeds a pleurisy, but *frequently* a squinancy." p. 59. "A peripneumony coming upon a pleurisy or quinzey, for the *most part is worse* than arising of itself," &c.

SCHENCKIUS, an author, or rather compiler of a most indefatigable character, in his *Observ. Med. Rariores*, fol. 1644, has given from various sources much of what seems applicable to croup. He speaks, p. 208, "*De latente ac difficili Angina*," as without tumour, but as the most formidable species; and he gives several cases of speedy suffocation *in a few hours*, some apparently of croup. Of these, one is from BRASSAVOLUS, in his Com. on 22 Aphor. Hippoc. lib. 3. of a child *of his own*, of seventeen months, by *asthma*, (a term of so general a nature, then, as to render it more probably a case of croup,) "*quem dum audimus, paterna misericordia commovemur, & referentes horrescimus. Adde præter sonum, quem ingentissimum edit, non potens nisi recta cervice spirare,*" &c.—Schenckius, still dwelling on the superior danger of angina, in which nothing is apparent, mentions cases of death in eighteen, twelve, and even ten hours, a rapidity known only in croup. One from LUSITANUS, (Cent. 7, Curat. 90,) in which death occurred in twelve hours; "*fuit igitur sævus hic morbus angina, asperam arteriam occludens, & respirationem impediens,*" &c. He likewise refers to a case from LANFRANC, (An. 1270,) of a woman in angina, *cured by incision*, that seems allied to croup, for he extracted from the wound, "*frustum magnum viscosæ materiæ & foetentis, quæ fuerat sicut quoddam intestinum longum plus & grossum, unius majoris digiti quantitate: quæ quidem materia calore fu-*

erat extraneo condensata, qua quidem remota, remansit locus sine foetore," &c. p. 211.

At p. 203, Obs. 1. *De Suffocatione*. "Filius Marci Peresii, 5 menses natus, bene habitus, nullo præcedenti alio affectu, subito cum stridore & respirationis difficultate, è medio sublatus est. Quo genere mortis quoque, cum duos amississet filios, causam scire cupiens, ipso rogante, pectus aperuimus: & in regione juguli, glandulam illius loci, in strumam quandam magnam $3\frac{1}{2}$ pendentem, spongiosam, venisque refertam, & quæ beneficio membranarum dumtaxat, vasis maximis illis, juxta jugulum ascendentibus, adhærebat, excrevisseprehendimus: *Caniformi* quadam materia & sanguine oppleta: quo subito irruente, strumamque illam dilatante, adeo, ut vasa illius loci premeret, suffocatum fuisse infantem judicavimus," &c. He quotes VIERUS as his author, and although he considers it a strumous gland, yet I cannot but think the case to have been one of croup, especially as two preceding deaths had occurred in a similar way, and the child is represented as being in perfect health.

I may refer the reader likewise to what is said by him at p. 222, *De Asthmatis*; 224 *De Dyspnœa*; 238 *De Empyemate*; at p. 140, *De Catarrho*, Obs. 3, part of a reply from NEFIUS, in 1556, to D. C. P. medicus celebris: "S. Scribis infantes apud nos Catarrhis strangulationem minitantibus sæpenumero laborare; atque ex iis nonnullis Epilepticis paroxysmis corripì, ac peti a me rationem medendi," &c. He quotes also from MONAVIUS, lib. 5, what seems applicable in a degree to croup, and adds, "Nos quoque, infantibus etiam in cunis adhuc vagientibus, bimulis nonnullis, aliisque paulò majoribus, hoc malo affectis, & de prognostico certo aliàs perituris, vini antimonii grana aliquot, pro ætatis, &c. cum felici successu, exhibuimus," &c.

At p. 201, "*Ulcera Asp. Art. & Laryngis*," he quotes from Galen, de curand. morb. lib. 5, cap. 12. "Alter verò adolescens, annos natus circiter decem & octo, cum multis diebus ex destillatione laborasset, primum quidem sanguinem floridum, cum tussi expuit, non sanè multum, postea verò etiam *tunicæ ipsius partem*, quæ tegens intrinsecùs arteriam, in fauces & os per ipsum arteriæ caput, (*Larynga* vocant,) ascendit. Videbatur autem mihi, tum ex crassitudine ejus conjectanti, tum ægri sensu, *ipsius Laryngis esse internum corpus*."

I have been so copious in my references that I fear the patience of my readers will be exhausted; I shall therefore omit what I have collected from Bonetus, and a number of other authorities amounting probably to double of what is thus presented to view, with only two or three short unconnected extracts, from his works.

P. 497. "*Materia crassa aliquando continetur in ipsa arteriarum asperarum cavitare,*"—p. 485, from RHODIUS, "*Postquam A. Spiegelius, plurimum deditus experimentis, deprehendisset in orthopnoeis dissectis, inflammatam Asperæ Arteriæ tunicam ob materiam tenuam ac biliosam ipsi infarctam,*"—p. 577, Obs. 3, dissection, "*trachea arteria sanguine semi-concreto infarcta erat; quæ suffocationis causa fuit,*" p. 594, Obs. 5, is taken from *Ballonius*, (Cons. 76, lib. 1,) and seems an undoubted case of croup, terminating in peripneumony. The immediate effects of the primary disease were no longer visible; but it terminated as now is seen, and as Hippocrates pointed out, with death about the ninth day.—P. 607, Obs. 3, a healthy child of two and a half years, dies almost instantaneously, (1669;) dissection showed, "*inter annulum cartilagineum secundum & tertium sub larynge et scutiformi cartilagine, pituita quædam crassa magnitudine pisi, ea ipsa in parte adeò impacta hærebat, ut summa vi illa arctius imprimi non potuisset,*" &c. from MENTZELIUS.

I have adverted to the possibility of many of the membranous discharges from the trachea having been considered as polypi, but shall not pursue the subject further than to refer to the writings of F. HOFFMAN, (*Medicina Rationalis*, 4to. ed. 1738,) in which much is said on the different subjects here adverted to. See vol. 3, p. 71, 152, 371, 372; vol. 4, p. 389, 390 up to 400, and p. 439; vol. 6, p. 314, 318, 320; vol. 7, p. 272, 279, 281, &c.

Whether I have redeemed the pledge I proposed at the commencement of these remarks, I must leave to the judgment of others; again however, remarking, that a great deal of the force of many of the quotations is lessened, from their separation from the connecting matter; and although I may possibly be thought on some occasions to have adduced what may be regarded as problematical; yet I cannot but think, even with the abstraction of such, that enough is left fully to satisfy the most fastidious, that the croup has always been a subject of observation, since the very first moment that medicine has been exercised as a separate and independent branch of science. The fact seems to be, that scarcely a case, (connected with the different diseases I have enumerated,) occurs, in which evidence more or less, of a knowledge of the same events now occurring in, or following them, does not exist, that they were familiar to every practitioner, from the days of Hippocrates, who has left any records of his practice. Hypothetical notions founded on the erroneous opinions of catarrh, and its origin in the brain, it is true, blinded their judgment, and too frequently caused them to regard the cause as the effect. The inflammation of croup may terminate in suffocation from spasm before a

membrane forms; even this, if not excessive in degree, may be expected; and yet the disease not being fully broken, (by metastasis or otherwise,) falls on the lungs, inducing peripneumony; and if death ensues, no evidence of the primary disease may be apparent; the patients die with infarcted lungs or empyema, or fall into phthisis, whilst the original complaint is altogether overlooked. The numerous instances of membranes discharged under circumstances, (except from croup,) inexplicable, show that this disease, though known, was not adequately comprehended. The angina, (cynanche of Hippocrates,) can be elucidated only from our croup, or otherwise the Greeks must have had a disease unknown to us; for, excepting croup, no anginose affection conforms to the statements of Hippocrates relative to cynanche. *Inflammati sine rubore vel tumore*; *Tussis, cum difficili respiratione*, approaching to strangulation, (*orthopnœa*,) is unknown to the present race of physicians, excepting in croup. What is said will equally apply to all the records of medicine from Hippocrates down to the present period. All these writings more or less evince a knowledge of croup, although its pathology was not understood till lately. The former views of asthma, as a generic term, embracing almost every variety of difficult respiration; infantile asthma, formerly so common, but now unknown, can only be fully explained by croup. Ulceration or imposthume in the trachea, to us unknown, receives a full explanation by our knowledge of croup. Worms and polypi discharged from the lungs, all were probably concretions of a croupy character, but which an erroneous pathology has transmitted to us. And although I shall not pretend to affirm that *all* I have quoted is absolutely demonstrative of croup; yet I apprehend enough exists after making all due allowance, to prove that the disease in question is as old as our first authorities; and as Hippocrates refers to those who preceded him, it is equally probable, that as like causes are always followed by similar effects in the animal economy, they likewise were acquainted with the disease.

ART. IX. *Two Cases illustrative of the Pathology of the Nervous System.* By WILLIAM E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

THE precision with which the symptoms of disease during life, indicate the organic lesions going on within the body, is frequently so strikingly illustrated upon dissection after death, that the physician

is ready to rank his as an exact science. A dream so gratifying is, however, scarcely excited when additional experience dispels it, and leaves the votary of medicine still to deplore the imperfections of his art. The two following cases will serve to show the correctness of these observations. In the first it appeared as if each organic derangement was immediately indicated by its appropriate symptom, and thereby communicated to the practitioner in language not to be misunderstood. In the other the ordinary sympathies and alliances of the system seemed to be quite as completely asleep, or so obscure as to render it next to impossible to detect what was going on internally.

CASE I. Pulmonary Consumption with Arachnitis of the Brain and Spinal Marrow.—N. M. a black girl, aged twenty, a domestic in the family of a merchant of this city, was taken unwell about the middle of July, 1827. The symptoms which appeared were a dry husky skin, with not much heat in it; pulse frequent; difficulty of breathing on ascending a flight of stairs; slight head-ache; no appetite; bowels regular; menstruation regular up to the last period; tongue indicating no derangement in the viscera of digestion; a sound of the thorax somewhat flattened on percussion on the right side under the clavicle.

I directed her a diurnal diet consisting in milk one pint, mixed with water one pint, and bread four ounces, which was continued for one month, with an evident improvement in the symptoms; for she became stronger; the expression of countenance was better, and her breathing easier. I observed, however, the frequency of pulse to continue; it was seldom less than 140, and generally 160 in the minute. As she was extremely diffident, I often charged her with being agitated, but this she denied. There being, however, no local pain, except in the head and that slight, I must confess that notwithstanding her assertions, I attributed much to agitation.

The symptoms seemed at the expiration of the month to have worn away so completely, with the exception of the state of pulse, that I gave her permission to live more freely, indeed almost as usual, and discontinued my visits. The only medicinal application during this month was a blister upon the upper front part of the chest, which was kept open for some days.

I saw nothing of her afterwards till about the middle of September, and supposed her well; I was then informed to the contrary; and as in consequence of a newspaper paragraph, the tea of liverwort had begun to excite considerable attention for pulmonary affections, her mistress desired its exhibition in her case. This was conceded, and

persevered in for fifteen or twenty days, without the slightest benefit, except that she thought her head relieved by it. About the close of the administration of this remedy, her stomach became exceedingly disordered, and rejected every thing for a day or two, when its extreme irritability ceased, but with an entire loss of appetite.

October 15th, 1827.—At this period the symptoms are, one eye turned from its axis, squinting, double vision; articulation rather slow; does not complain of pain in the head; pulse one hundred and sixty; respiration rather easy and tranquil; no pain in thorax. Percussion beneath the right clavicle, yields a heavy fleshy sound. On the application of stethoscope no respiration heard there, but it is heard in other parts of the same lung. Sound and respiration of right lung good. No complaint of abdomen. Loss of appetite. I directed the renewal of the blister to the thorax, and ordered tinct. benz. comp. gtt. xxx. three times a day.

A few days after this she became incapable of discharging her urine; the bladder distended and produced the excessive pain, attending that state. Her articulation was broken by sobs and cries, with stuttering and thick speech. The lower extremities became motionless, though extremely painful when touched or moved abruptly; and the other symptoms of cerebral disease increased. The bladder was relieved of a pint and a half of very fœtid urine by the catheter, to which instrument I resorted every day afterwards so long as she lived, from the incapability of discharging the urine still continuing, attended with pain and extreme fœtor. For two days before death she became comatose, like one under the influence of laudanum, and died, November 4th, 1827, by a very gradual and easy extinction of life.

I examined her twenty-five hours after death, in company with Dr. MEIGS, stating to him previously that I had experienced much difficulty in satisfying myself, on the diagnostics of the disease. That I felt assured, from percussion and auscultation, that the right lung under the clavicle was carnified, as in consumption; but that she never had any thing like night sweats from the beginning to the end of her sickness, no local pain, no cough of any constancy, and no expectoration. The symptoms in fact of hectic fever had never been evolved; latterly she had on two or three occasions spit up a very trifling quantity of matter resembling a softened tubercle, but this was all. I also told the doctor, that to account for the symptoms, we, on the principles of physiological medicine ought to find the brain about the corpora striata and thalami softened or diseased, and also the medulla spinalis in the same way.

Autopsy.—Middle atrophy; with a very tranquil expression of face; frame well developed.

Head. Dura mater presented the appearance of being half dried on top of hemispheres. Pia mater congested with red blood. Arachnoidea at basis of brain much thickened by coagulating lymph, identified with its structure; this was more eminently the case about the chiasm of the optic nerves and the inferior part of the third ventricle. The ventricles contained about one ounce of serum; the fornix was in a pulpy, soft state, and the septum lucidum was stretched and resolved here and there into fasciculi of fibres, forming a very imperfect partition between the ventricles. The arachnoidea of ventricles not obviously thickened. Corpora striata softened. An inflammatory adhesion injected with red blood and cylindrical, caused the thalami to adhere; possibly this adhesion might have been the commissura mollis, but if so, it was lower down and further forward than usual, and much stronger. Substance of brain showed numerous red points of cut vessels. Nothing remarkable about cerebellum, pons and medulla oblongata; except that wherever the arachnoidea stretched from eminence to eminence it was thickened and inflamed.

Medulla spinalis. Dura mater natural; tunica arachnoidea inflamed in its whole length and thickened, adhering very closely to pia mater, and to the roots of the spinal nerves. Texture of medulla softer at places than natural.

Thorax. Right lung carnified in its upper lobe, and adhering to the thorax where it gave out the flattened sound; raw tubercles in great abundance through its structure, but none of them softened; permeable imperfectly to air in its two lower lobes. Left lung permeable every where, but abounding in immature tubercles from a line to three in diameter; none of them softened. Heart natural.

Abdomen. Liver healthy, with the exception of a few tubercular masses interspersed in it. Stomach contained a thin, dark-coloured fluid, smelling disagreeably; mucous coat somewhat browned, and the lymphatic glands along its lesser curvature, and in lesser omentum, enlarged and tuberculous; some of them were seen in the thickness of the stomach, along its lesser curvature, from one to two lines broad. Intestines generally healthy; at least the marks of disease were not evident, with the exception of a light slate-colour at their upper part in the mucous coat. Organs of generation generally healthy; the internal coat of uterus injected with blood, and could be raised easily with the point of a knife.

By an oversight I neglected to look at the mucous coat of the ileo-colic junction, and at that of the bladder, which latter organ, at the time

of death, contained some of the dreadfully foetid urine, a little of which escaping by pressure made the room almost intolerable to us.

I consider this case to have been one of the most satisfactory for elucidating the location of disease by the lesion of function, or in other words, for illustrating physiological medicine. Without the squinting, and without the paralysis of the bladder, it would have been very difficult to ascertain what was going on in the brain and spinal marrow.

CASE II. *Ramollissement of Hemispheres of Cerebrum.*—Samuel Waggoner, aged sixteen, a resident of Bellefonte, Centre county, Pennsylvania, received at harvest-time, 1827, a slight blow at the internal canthus of the left eye, from the finger of a boy, who was trying to knock off his hat. In a short time afterwards a tumour began to show itself at the part, and which, in its progress pushed the eye-ball upwards and outwards, and destroyed its vision. Last winter he was brought to the Pennsylvania Eye Infirmary, and consigned to the professional care of Dr. ISAAC HAYS. As he could not be accommodated in that institution, he was transferred to the Alms-house, and put under the charge of Dr. GIBSON, who, on December 19th, 1827, in the presence of the clinical class, extirpated the tumour, and along with it the eye-ball. In this operation all the contents of the orbit were removed, and a part of the inferior margin of the orbit, which was in a softened, ulcerated state.

The tumour was spheroidal, from two to two and a half inches in diameter; was semi-transparent, traversed by small ligamentous fibres, and had the consistence of thick glue when permitted to cool after being boiled. It was principally albuminous as it coagulated and became opaque on immersion in spt. wine. I did not see Waggoner afterwards till May 1st, when the surgical wards of the house devolved upon me in the usual routine of business. The tumour had in the mean time resumed its growth, had swollen enormously that side of the face, resembled in structure the first one, and was subject to occasional bleeding. It was a flattened oval of five inches in diameter, and had a fungous appearance. It filled up the orbit, had either displaced or removed the whole anterior parietes of the upper jaw, as well as of the side of the nose, and also occupied the antrum, and had shoved downwards the left corner of the mouth.

The patient at this time, as might be expected, was weakened and emaciated; his appetite was indifferent. He however took his exercise daily by walking in the ward, or in the court; his intellects were good, not obviously impaired, and neither were his senses.

He was sometimes sprightly when he could withdraw his reflections, from his horrible condition. Considering his case hopeless, I prescribed for two or three weeks, only common cerate dressing; and black drop at night.

In the mean time the discharge from the tumour became so offensive, that to correct it, I directed it to be washed once or twice daily with pyroligneous acid. Persisting in this application for a week, I was struck in the progress of it with the tendency of the tumour to slough. It encouraged me to keep on with the acid, and the tumour, still diminishing in size, by the detachment continually of large sloughs, I had at length the pleasure of seeing almost the whole of the tumour, with the exception of some deep-seated parts, of but small thickness, entirely removed; and what was quite as unexpected, even the edges of the skin began to cicatrize. The falling off of the tumour left a frightful excavation in the place of the upper jaw, one side of which exposed the left nostril in its whole length, the septum being seen from anterior to posterior margin.

In the progress of the tumour and of its sloughing, Waggoner had pain in the face, and also in the forehead, especially the left; and this pain continued with remissions till his death, which occurred June 19th, 1828, at nine o'clock, A. M. *Till the day before his death he took his exercise as usual.* On no occasion had he a symptom of paralysis, partial or general, nor of convulsion, nor interruption to his urine. His senses were perfect, and also his intelligence. In my attendance, I often directed such questions as might inform me of derangement of cerebral structure, if any existed, and invariably the replies only alluded to the pain in his forehead. The evening before his death he vomited freely, and threw up some bilious matter. The want of cerebral symptoms, the sloughing of the tumour, and the favourable time of his life, excited some conjectures on his possible recovery.

Autopsy, twenty-seven hours after death.—Head. The centre of the anterior left lobe of the brain was resolved into a soft putrilage equivalent to about three-fourths of the whole lobe. The periphery of the lobe enveloped this mass; the bottom of the lobe was not more than two lines in thickness at most points, and at one point it was perforated by the ramollissement, and led to an ulceration of the orbital process of the frontis, communicating with the cavity of the orbit. The parietes of the ramollissement were six or eight lines thick above. The whole corpus striatum of that side was dissolved, and the ramollissement consequently invaded the parietes of the left lateral ventricle.

About one-third of the right anterior lobe, bordering upon the anterior margin of the corpus callosum, was also dissolved in the same way, and about one-half of the corpus striatum of that side. Adhesion of the pia mater of an inflammatory kind, existed between the flat sides of the anterior lobes, and thereby the ramollissement of the two lobes formed a common mass. The whole of the fornix and of the septum lucidum, and a thin lamina of the under surface of the corpus callosum were dissolved. The entire cerebrum was several degrees below the common consistence, both in the cortical and medullary substance. The cortical covering of the convolutions over the anterior two-thirds of the cerebrum was of a light pea-green colour, the remainder was of the natural colour.

The putrilage or ramollissement consisted in bits of cerebral matter, mixed with serum and red blood, its boundaries were not well defined. In the centre of the mass it was diffluent, and became as it receded from the centre, less and less so, until it blended insensibly with the surrounding cerebral matter.

The cerebellum was sound.

The arachnoidea of the whole base of the brain was thickened and opaque, and in that state surrounded the nerves of the base: on the under surface of the cerebellum, of the pons varolii, and of the medulla oblongata, it was not only thickened and opaque, but had a coating of purulent coagulated lymph.

The red inflammation of the pia mater was very conspicuous, where the ramollissement of the two anterior lobes coalesced, and on the under surface of the left lobe where its periphery was so thin. At the latter spot the dura mater was ulcerated through to the extent of twelve lines or more in diameter.

Beneath the ulceration of the dura mater, at the side of the left ethmoidal gutter, was the ulceration just alluded to, of the orbital process of the os frontis, equal in extent to the hole in the dura mater. It was not, however, a single hole in the bone, but several of different sizes, giving it a riddled appearance, and forming a communication between the cavity of the orbit and of the cranium. I am not certain whether any part of the dissolved brain actually found its way before death into the orbit through these holes; there was, however, no impediment, unless it might arise from their being rather too small. There is no doubt that a probe might have been passed from the orbit into the very centre of the ramollissement, if the communication had been suspected before death.

The thorax was perfectly sound, and no disease was observable in the abdomen. The bladder was distended with urine.

The medulla spinalis and its membranes were perfectly sound. I was struck with the facility, with which the medulla spinalis, after its membranes were peeled off, could be divided from one end to the other into an indefinite number of strings or cords, running parallel with one another, like the fibres of a piece of white oak. I imagine that this test will be found to prove its healthiness, when there is a doubt of its being too hard or too soft.

The remarks upon this case are, 1st, that no satisfactory date can be assigned for the commencement of the softening, or its cause. I am induced to consider it as a consequence of the tumour of the orbit, whose development after the operation caused the absorption of the orbitar process of the os frontis, and irritation of the adjacent part of the brain, and of its membranes.

2d. It is surprising that such cerebral disorganization was followed, neither by suspension or derangement of intellect, of the senses, nor of myotility.

3d. That the tumour should have sloughed so completely away under the application of pyroligneous acid. Does not this indicate some unknown power in it over such tumours well worthy of further inquiry and experiment?

4th. The second progress of the tumour reduced the cavity of the antrum, of the orbit, and of the left nostril, into one large excavation, the whole periphery of which was exposed at the time of death. This tumour, though it shoved the bones opposed to it out of their places, and caused them to drop off; as for example, all the exterior side of the left nostril, and the parietes of the antrum above and in front, as well as the left os nasi, and nasal process of os frontis; did yet secrete patches of bone in its own thickness, and formed for itself an imperfect shell at the back and external side of the antrum, perhaps by the distention of the latter. The septum narium did not give way, but was pushed over to the right side as far as it could go.

ART. X. *Case of Organic Disease of the Brain.* By JOHN WARE,
M. D. of Boston.

THE subject of this case was a lad aged nearly ten years, who had usually enjoyed good health, and had never been liable to pain, or any other symptom affecting the head. Previously to my seeing him, he had for some time complained of pains in the head, which came on

towards evening, but went off during the night, so that he awoke in the morning apparently in his usual health. A few days before I first saw him, he had received a blow in the side from another boy, which caused him to fall with some violence. His belief was, that he did not strike his head; but whether he did or not, it is certain that the jar given by the fall, was such as to produce very serious consequences upon the brain. He was stunned, and upon rising, was dizzy and bewildered, so as not to be able at first to find his way into the house. These effects, however, soon went off, but his evening paroxysms became afterwards more severe, and were accompanied once or twice by nausea and vomiting.

April 14th, 1828, I first saw him, being in attendance upon another patient in the same house, and advised some remedies. As he was, however, very averse to taking medicine, and particularly as he was so comfortable for a considerable part of the day, his parents did not insist upon the course recommended, and no essential alteration took place for more than a week.

April 24th, he became much worse, and I saw him again. At this period he presented the following symptoms:—The pains in the head were very severe, and the paroxysms had become more frequent, and extended throughout the whole day. The pain, although nearly constant in some degree, became at times so excruciating as to cause him to cry out loudly; and whilst it continued, he wished to have his head held, and pressed very tightly by his mother's hands, across the forehead, which was its principal seat. There was considerable sensibility to light and sound; no dilatation of the pupils, and no imperfection of vision whatever, except that on the day on which he grew worse, he complained for a short time that "things looked as if the air was full of smoke." The respiration was generally slow, though liable to be quickened from slight causes. The pulse varied without any assignable cause from 56, which was the lowest number noted, to 84. It was generally about seventy, but was raised by the operation of medicines, or by any other excitement or irritation to 100 or even more. When not excited, it was irregular with regard to the length of the interval between the beats, but was never, that I observed, intermittent. The tongue was covered at first with a thin, white coat, which after a short time became brown and dry. The stomach was extremely irritable; vomiting often took place spontaneously, and was constantly produced by slight causes. It was alleviated only by the operation of cathartics.

At this period the treatment consisted in the repeated application of leeches and blisters to the head. Both of which, however, irritated

and disturbed him very much, and were not well borne, particularly the latter. Free purging was also employed, but it was very difficult at first to get medicines to operate well, as much from the tendency to throw them up from the stomach, and from his aversion to taking them, as from the torpid state of the bowels themselves. In the course of the three first days he took fifty grains of calomel, twenty of jalap, twelve of the powdered seeds of colchicum, eight of rhubarb, and nearly two drops of Croton oil, a great part of which was retained, before the bowels were freely moved, and that not without great irritation, pain, and vomiting.

For about three weeks the same plan of treatment was continued, so far as his great unwillingness to submit to remedies would permit. He continued to take considerable doses of calomel, followed by such other cathartics as could be taken or borne on the stomach, with the intention not only of purging, but of affecting the system with mercury. Salivation did not, however, take place. During this period there was no material alteration in the essential symptoms, although they varied much at different times. Upon the whole, however, a gradual but considerable improvement had taken place by the middle of May. Still he continued to have the paroxysms of pain, which were often followed and relieved by spontaneous vomiting, more particularly in the morning. He suffered much also from the pain which accompanied the operation of medicine, but was worse if the bowels became costive. He got some appetite, and although frequently vomiting his food undigested in the morning, he was still able to retain it at other times of the day, and gained some strength. The pulse continued as above described, though perhaps approaching more frequently to the natural standard in respect to frequency and regularity.

This interval of apparent amendment was very short, and about the 20th of May, the symptoms returned in their original force. Leeches and a blister were repeated, and he was then put upon a mercurial course with the advice of Dr. JACKSON, who at this time visited the patient in consultation. Twenty grains of calomel were given daily, and the strong mercurial ointment rubbed freely upon the inside of the thighs. This course was continued for a fortnight, although the quantity administered did not every day amount to that above stated. His mouth did not become affected, yet the system seemed to be decidedly under the influence of the remedy; he gradually improved for the second time. His pulse became more natural, his bowels more regular, his tongue clean, his appetite better, and his stomach more capable of bearing food. Still many of the most

important symptoms of his complaint continued to manifest themselves occasionally, and they were always called forth by the least irregularity or improper indulgence in eating. Even a regular and moderate morning's meal was often followed by a paroxysm of pain, which was only relieved by vomiting.

In the beginning of June, I was absent for a few weeks, and this patient was attended by my friend Dr. GEO. HAYWARD. During this period he continued to amend still more rapidly than before; the mercurial course was suspended, and his apparent convalescence was hastened by the favourable operation of a few doses of castor oil and oil of turpentine on his bowels. Through June, July, and the first part of August, he continued so regularly to amend, that it seemed almost certain that no organic disease of the brain existed. The sulphate of quinine and some other tonics were administered, with a favourable effect upon the state of his stomach; and he was much benefited by riding and walking, but more particularly by sailing. He gained considerably in weight and in strength, and was able to walk some distance. His pulse became entirely natural, his bowels were open without medicine, and he was able to bear plain and simple food in moderate quantity. The least offence, however, with regard to quantity or quality was followed by vomiting and pain in the head; and as his appetite was very good, few days during the summer elapsed in which he had not a paroxysm of pain, often accompanied by vomiting.

August 17th. Having been for a few days not so well as usual, he eat a very small quantity of corned beef, which did not readily digest, and produced head-ache; he continued to grow more unwell, and on the 20th, a cathartic was prescribed, which irritated and produced vomiting, without evacuating the bowels. His former symptoms all returned, though with rather less violence than before. But little medicine was given on account of the irritability of the stomach, and the great aversion to taking it, and the bowels were never properly evacuated. Indeed those medicines which were taken and retained, produced no effect whatever. On the 28th he seemed less sensible to what was going on around him, though still capable of taking some notice, and of answering questions rationally; there was also some insensibility of the pupil, but no blindness, and nothing like the fixed glare of hydrocephalus. The next morning he was seized with convulsions, and died in about eighteen hours.

Being absent from town myself on the succeeding day, the head was examined, about ten hours after death, by my friends, Drs.

HAYWARD and M'KEAN. I am indebted to the latter for the following account of the dissection.

“Appearances on dissection, by J. W. M'Kean, M. D.—External appearance. Face and limbs emaciated; abdomen tumid.

Head. The integuments adhered very firmly to the cranium at the posterior part, and were unusually vascular. On opening the cranium, the dura mater appeared exceedingly tense. The veins of the pia mater, more particularly those entering the longitudinal sinus, were very large but not distended. The convolutions of the brain were somewhat depressed. There was slight serous effusion under the arachnoid and some portions of coagulable lymph. On removing the upper portion of the left lobe by thin slices, an evident deep-seated fluctuation was perceived, and on opening the lateral ventricle, five or six ounces of a straw-coloured fluid were collected, part of which was from the ventricle of the opposite side, and also from the third ventricle, the opening into which was greatly dilated. The fornix, septum lucidum, and the thalami were unusually firm, and of unusual whiteness. The consistence of the other parts of the cerebrum was natural; numerous red points presented wherever an incision was made. On dividing the tentorium slight adhesions were found between this and the cerebellum. On the left crus cerebelli between the arachnoid and pia mater, a small globular tumour, was seen, one-third of an inch in diameter, of the consistence of the cortical substance, and of a granulated texture. On the inferior surface of the tentorium, near its attachment to the petrous portion of the temporal bone, on the left side, was a bilobated tumour, very firmly adherent, of firm consistence, of an oval form, about one inch in length. In the left lobe of the cerebellum there were two, and in the right lobe three round tumours from one-half to three-fourths of an inch in diameter. On dividing one of them it was found to consist of a firm cyst, containing a substance of a greenish-yellow colour, similar in its external characters to the matter found in encysted tubercles of the lungs. These tumours were imbedded in the convolutions of the cerebellum, and by care could be removed without destroying the texture of the parts. Those in the left lobe were less firmly attached to the pia mater than those in the right. The substance of the cerebellum appeared less firm than natural, but no *ramollisement* existed around the tumours. The pia mater of the medulla oblongata was considerably injected, and a small quantity of serous fluid was found at the base of the brain. The thorax and abdomen were not examined.”

During the whole course of this disease the functions of the brain were unaffected in a remarkable degree. There was no failure of the powers of the intellect, memory, sensation, speech, or motion. There was never any thing peculiar in his gait; his manner of walking at different times was determined wholly by the amount of his muscular strength. He moved precisely as any other person would do who was equally weak. His countenance was melancholy and his eye rather heavy. He was generally silent and depressed, and easily moved to tears by very slight causes. So much improvement had taken place during the summer, that I was led to hope the complaint might be primarily an affection of the digestive organs, and that he would finally recover, although I had previously been firmly persuaded of the existence of some organic derangement in the brain. The event shows in how quiescent a state, a very considerable amount of organic disease may remain, so long as the digestive organs can be maintained in a natural and healthy state.

It is interesting to inquire what influence the fall which occurred in the early part of this case may have had in its development. That the disease had been forming for some time before can hardly be doubted, and yet the shock occasioned to the whole brain, may have had a decided influence in accelerating its progress. Some years since a case of hydrocephalus occurred in a lad of the same age, a cousin of the present subject, in whom the first symptoms of the complaint came on immediately after a slip upon the ice, which did not cause him to fall entirely down or to strike his head, but produced in the effort to save himself a very severe jar, the effects of which were felt at once, and were followed by death in less than three weeks. In the brain in this case, nothing was found but a collection of water in the ventricles.

In each of these cases the patients were confident that they did not strike their heads, but experienced a violent shock at the moment of the fall.

Boston, September 29th, 1828.

ART. XI. *An Account of a Case of Osteo-sarcoma of the Left Clavicle, in which Exsection of that Bone was successfully performed.*

By VALENTINE MOTT, M. D. Professor of Surgery in Rutgers College, New York.

ON a former occasion, the author of the following paper laid down the principles which ought to govern a surgeon in relation to operations generally, and gave in illustration an account of a successful amputation at the hip-joint.* Since then, he has enjoyed the satisfaction of seeing the same views beautifully illustrated by Dr. BARTON's excellent operation for the production of an artificial joint;† and has himself presented a further illustration in the successful ligature of the COMMON iliac artery.‡ The instance now to be adduced, is of a character to supply all the confirmation desirable to the establishment of any such principle, and we think it may henceforward be regarded as an *axiom*, that it is the duty of a surgeon to operate *in every case* which allows of a rational hope of success, either of improving the patient's condition, or of preserving his life. It is almost superfluous to add, that in arriving at this conclusion, we do not believe it proper for every man who is *nominally* of the profession to assume such high responsibilities; but, that we regard those as *surgeons*, and those alone, who have, by conscientious devotion to the study of our science, and the daily habitual discharge of its multifarious duties, acquired that knowledge which renders the mind of the practitioner serene, his judgment sound, and hands skilful; while it holds out to the patient rational hopes of amended health and prolonged life.

William B. Yates, of Charleston, S. C. aged nineteen years, of a plethoric habit, consulted me on the 26th of May last, respecting a tumour situated on the left clavicle.

He stated that on or about the 1st of February, 1828, he discovered a small tumour, as large as a pigeon's egg, very hard and immovable in the left clavicle; no pain whatever attended it, and the skin was of its natural colour. He can assign no cause to which it could be attributed; he had always enjoyed good health; he recollects, however, having sprained his arm a short time before he first observed the tumour, but does not ascribe it to that, as it might have existed

* See Philadelphia Medical and Physical Journal, Vol. 14, p. 101.

† Idem, p. 177.

‡ American Journal of the Medical Sciences, Vol. 1, p. 156.

previous to the accident, and unknown to him. He applied immediately to a physician, who pronounced it an encysted tumour, and applied warm salt-water; which, not producing any good effect, blisters, poultices, a seton, and escharotics, were resorted to, but without retarding in the least its growth. These remedies debilitated him so much, as to prevent him from taking ordinary exercise. But during his passage to New York he regained his, in some degree, former energy, and has since enjoyed pretty good health.

On examination, a conical tumour, about four inches in diameter at its base, and of an incompressible hardness, was found on the anterior portion of the clavicle, to which it was firmly attached; the apex of the tumour was covered with luxuriant fungous granulations, the consequence of the above applications, from which profuse bleedings from time to time took place.

The rapid increase of the disease led him to request that some operation should be performed, preferring to submit to a new and uncertain operation, rather than perish with the terrible disease that now threatened his existence. All the circumstances were candidly stated to him, both by Dr. BARROW, who was associated with me in the case, and myself—that the operation was without a precedent—that it was impossible for me to say the disease could be eradicated—if it could, it would be exceedingly difficult and dangerous—that the operation would be very complicated, as the parts connected with it were of the greatest importance to life, and involved the most important structure. Nevertheless he was perfectly resigned, and resolved to submit to a doubtful remedy. With a composure and fortitude which has rarely been equalled within my observation, he said he had resolved to take the chance of the operation, and disregarded the pain and suffering to which he must be subjected.

On the 17th of June, between eleven and twelve o'clock, A. M. he was placed upon a table, with his shoulders a little elevated, inclining to the left side. Assisted by Dr. BARROW, Dr. PROUDFOOT, and Dr. A. E. HOSACK, in the presence of Drs. HULL, STORER, LEVERIDGE, PRATT, and a number of my pupils, the following operation was performed:—

An incision was commenced over the articulation of the clavicle, with the sternum, and carried in a semicircular direction, as close to the fungus projections as the sound integuments would admit of, until it terminated on the top of the shoulder, near the junction of the clavicle, with the acromion process of the scapula. This incision exposed the fibres of the pectoralis major, which was divided as near the tumour as possible; in accomplishing this, as well as the first in-

cision, arteries sprung in every direction, and required ligatures. A number of large branches of veins, under this muscle, emitted blood freely, and required to be tied.

In conducting the incision through the pectoral muscle, towards the scapular extremity of the clavicle, care was taken to avoid the cephalic vein, as it passes between this and the deltoid muscle. A small portion of the latter muscle was detached from the clavicle, which readily allowed the vein to be drawn outward towards the shoulder.

On attempting to pass the forefinger under the vein and deltoid to the lower edge of the clavicle, it was found impracticable, as the hard osseous part of the tumour extended beyond this point, and was completely in contact with the coracoid process of the scapula.

Finding it impossible, from the size of the tumour and its proximity to the coracoid process, to get under the clavicle in this direction, an incision was made from the outer edge of the external jugular vein, over the tumour, to the top of the shoulder. After dividing the skin, platysma myoides, and a portion of the trapezius muscle, a sound part of the clavicle was laid bare at a point nearer the acromion than a line with the coracoid process; a steel director, very much curved, was now cautiously passed under the bone from above; which, from the firm bony state of the tumour at this part, had a considerable obliquity outwards. Great care was taken to keep the instrument in close contact with the under surface of the bone. The depth of the bone from the surface, rendered it somewhat difficult to accomplish this safely: an eyed-probe, similarly curved, conveyed along the groove of the director a chain saw, which, when moved a little, showed that nothing intervened between it and the bone; the clavicle was then readily sawed through.

The dissection was now continued along the under surface of the tumour, below the pectoralis major; here a number of very large arteries and veins required tying. The first rib being next exposed under the sternal extremity of the clavicle, the costo-clavicular or rhomboid ligament was divided, and the joint opened from the lower part. This gave considerable mobility to the diseased mass, and encouraged us to believe that its complete removal would be practicable.

By means of a double hook and elevator, with the assistance of our strong and very broad spatulas, properly curved, we were enabled to elevate a little the sawed end of the clavicle. After loosening the parts about it, by keeping close to the tumour, we wished to discover the subclavius muscle, as it is inserted in the bone about this situa-

tion; but it could not be seen, as it was incorporated with the diseased mass. Had this muscle been found, the separation of the tumour would have been much less difficult and tedious, as, by keeping above it, the subclavian vein is of course protected. The origin of this muscle, from the cartilage of the first rib, was seen and divided, but it was almost immediately obliterated in the tumour.

Continuing the removal of the tumour at the upper and outer part, the omo-hyoideus was found lying under it, which we exposed from where it passes under the mastoid muscle, to near its origin from the superior costa of the scapula. In separating the tumour from the cellular and fatty structure, between the omo-hyoid muscle and the subclavian vessels, a number of large arteries were divided, which bled freely, and particularly a large branch from the inferior thyroïdal.

The anterior part of the upper incision was now made from the sternal end of the clavicle, and carried over the tumour, until it met the other at the external jugular vein. After cutting through the platysma myoides, this vein was carefully separated from the surrounding parts, and two fine ligatures passed beneath it, and tied a short distance from each other; the vein was then cut between the ligatures.

The clavicular part of the sterno-cleido-mastoïdeus was next divided, about three inches above the clavicle in the direction of this incision. The deep-seated fascia of the neck being now exposed, the mastoid muscle, and the diseased mass, were very cautiously separated from it, until the anterior scalenus was exposed.

The subclavian vein, from the edge of the scalenus anticus to the coracoid process, was so firmly adherent to the tumour, as to lead me at one moment to believe that the coats of the vein were so intimately involved in the diseased structure, as to render the complete removal of the morbid part utterly impracticable. By the most cautious proceeding, however, alternately with the handle and blade of the knife, we finally succeeded in detaching the tumour, without the least injury to the vein. This part of the operation was attended with peculiar danger and difficulty. At every cut either an artery or vein would spring, and deluge the parts until secured by ligatures. Besides several large veins, the external jugular was so situated in the midst of the bony mass, as to require two more ligatures in this place, near to the subclavian, and it was again divided in the interspace. Near the sternal end of the clavicle, a large artery and vein required tying; they were considered as branches of the inferior thyroïdal artery and vein.

From having cut through the clavicular portion of the mastoïdeus

muscle, obliquely upwards and outwards a little above the tumour, we were enabled, by turning this down, and keeping close to the fascia profunda, to detach the tumour from over the situation of the thoracic duct and junction of the internal jugular and left subclavian, without the least injury to these important parts.

To reach the lower part of the tumour as it extended upon the thorax, it was necessary to separate the pectoralis major in a line with the fourth rib, and to make a transverse incision two inches in length through the integuments and muscles at about its centre. The incision upon the neck extended from the sterno-clavicular junction in a semicircular direction, to within an inch of the thyroid cartilage and base of the lower jaw, and two inches from the lobe of the ear, and terminated near the junction of the clavicle and scapula.

The fungous and bleeding character of the apex of the tumour implied that it was freely supplied with vessels. The discharge of blood was so free at every step of the operation, that about forty ligatures were applied. It was estimated that the patient lost from sixteen to twenty ounces of blood.

All the parts now presenting a healthy appearance, the ligatures were cut close to the knots, and the cavity of the wound filled with lint. Long strips of adhesive plaster were applied to prevent the edges of this extensive wound from further retracting; a light compress, a single-headed roller loosely applied around the chest and shoulders, completed the dressing.

He was placed in bed upon his back, inclining a little to the right side, with the head considerably elevated, whilst the left shoulder and arm were supported by a pillow.

I requested two of my promising pupils, MESSRS. THOMAS G. SWAIN of New York, and JOHN W. SCHMIDT of Charleston, S. C. to remain with him during the day and following night; and such was the interest which his case excited in their minds, that they remained in the room with him night and day for the first week. To their unwearied attentions I am indebted for the following report of his symptoms.

June 17th, 1828, 7 o'clock, P. M. Feels comfortable, except being nauseated by the wine and water given him during the operation, which he says generally produces this effect upon him. Some reaction is indicated. Between 7 and 8, P. M. took two cups of gruel, and has since vomited a little. 9 P. M. Pulse 110; skin moist and cool. He feels tolerably comfortable, and is much gratified that the operation has been performed. Took a little mint tea, which was grateful to him. 12 P. M. Has had a short repose; drank some mint tea, and feels quite comfortable; pulse 128; thirst considerable.

June 18th, 3 A. M. Has had a comfortable sleep, during which there was considerable hæmorrhage from the wound; pulse 120, hard and full. 8 A. M. Took a cup of tea, ate a piece of toast, with a few strawberries; feels better than previous to the operation; pulse 124. 12 P. M. Has slept during two hours, and is now in a comfortable sleep; pulse 130; skin moist and warm.

June 19th, 4 A. M. Feels much refreshed; administered the following:—R. Sulph. magnes. $\overline{3}$ ss.—calc. magnes. $\overline{3}$ j. M. dissolved in a small quantity of water. 10 A. M. Another cathartic directed, which produced an evacuation at 2 P. M. and afforded much relief. 9 P. M. Has taken toast and tea, and has a good appetite; pulse 124, and much softer; copious discharge from the bowels; febrile symptoms less.

June 20th, 3 A. M. Skin moist and cool; appetite good; pulse 120. 9 P. M. Pulse 106; bowels free; feels comfortable.

June 21st, 2 A. M. Thirst much abated; skin moist and cool; has slept well. 9 A. M. The bandage and part of lint removed, it being a little foetid; inflammation moderate, and accompanied with a slight suppuration; bowels being somewhat torpid, the following medicine was prescribed:—R. Pulv. rhei—mag. calc. \overline{aa} $\overline{3}$ iss.—sacch. alb. $\overline{3}$ j.—aqua menth. pip. $\overline{3}$ ij.—took two table-spoonsful every hour, which operated at half-past one copiously.

June 22d, 9 A. M. Has had small evacuations from the bowels; slept well and comfortably; pulse 108; the dressings were removed, except a small pledget of lint at the bottom of the wound, over which an emollient poultice was applied.

June 23d, 9 A. M. Has slept comfortably; pulse 109, soft and full; skin natural. Ordered the following cathartic:—R. Sulph. magnes. $\overline{3}$ ss.—magnes. calc. $\overline{3}$ j.—which was repeated in the afternoon.

9 P. M. Medicine has operated copiously; pulse 99, softer and more natural; skin pleasant; tongue clean; renewed the poultice.

June 24th, 9. A. M. Symptoms the same; bowels have been opened; removed some of the remaining lint; applied a fresh poultice; removed him to another bed for the purpose of airing his; no inconvenience from the removal; takes toast and tea, gruel, &c. through the course of the day.

June 25th, 9 A. M. Pulse 98; tongue clean; bowels torpid. Ordered a Seidlitz powder every hour till it operated; he took seven.

June 26th, 9 A. M. Pulse 95; slept well during the night; patient expressed a desire to eat; gave him some chicken broth, which was very palatable.

June 27th, 9 A. M. Pulse 84; at 10 o'clock administered an enema which produced copious evacuations.

June 28th, 9 A. M. Took some strawberries, toast and tea; takes $\bar{\zeta}$ vij. of the infusion of cinchona through the day.

June 29th, 9 A. M. Pulse soft and full; bowels torpid. 9 P. M. An enema administered which produced copious evacuations.

June 30th, 9 A. M. Pulse 95, full and hard; the wound is dressed every morning; it is now nearly half filled with healthy granulations. The skin much contracted; some ligatures have been removed, others quite loose. He requires an enema every other evening to keep his bowels open.

July 1st. Pulse 100; injection produced copious evacuations of a natural appearance.

July 2d. Permitted him to eat meat; pulse natural; wound continues to fill up rapidly with healthy granulations; continues to take the cinchona $\bar{\zeta}$ vij. per diem.

July 3d. Feels in every respect much better; pulse natural; skin moist; experienced a slight indisposition from a cold produced by a sudden change in the weather. Directed him a dose of the eccoprotic mixture.

July 4th. Wound has a healthy appearance, cicatrization has commenced; seven ligatures were removed; dressed it with lint over which a compress was applied.

July 5th. Sets up in bed with ease; two ligatures removed.

July 6th. An apparatus applied yesterday to support the arm. No unfavourable symptoms have appeared.

July 7th. A number of ligatures were removed to-day.

July 8th. Bowels require no more injections at present. Wound nearly filled, and is very florid and healthy in its appearance.

July 9th. The cut end of the remaining portion of the clavicle is perfectly sound and healthy.

July 10th. Continues to improve in strength; bowels still regular; skin pleasant; tongue clean; pulse natural.

July 11th. The slight catarrh complained of a few days since, has entirely left him.

July 13th. The end of clavicle entirely covered with healthy granulations.

July 14th. The ligatures remaining are very few; wound contracted astonishingly; nearly filled with very florid and healthy granulations. Walked down stairs to dinner yesterday and to-day without the slightest inconvenience.

July 15th. The patient goes about the house with his arm in a sling and the apparatus to support the shoulder.

July 16th. No more ligatures remaining; the granulations rising above one part of the integuments, require pressure. Continues the infusion of bark.

He continued to improve in general health, and the wound gradually filled up, until the middle of August, when he left the city on an excursion of pleasure to the springs at Saratoga. He returned in September in better health than he had ever enjoyed.

The tumour is about the size of a man's doubled fists, or of a circumference just to allow me to grasp it with my fingers fully extended. It consists of a bony cup, incompressibly hard at all parts, except superiorly and inferiorly to a small extent. From an opening of an elliptical shape at the upper part, protruded a bleeding fungus of the size and shape of half a hen's egg. At the under surface, as it lay upon the great subclavian vessels, the bony character is less manifest; the structure about the centre particularly appearing to be cartilaginous or semi-osseous. This bony enlargement occupies the clavicle from the sternal articulation to within half an inch perhaps of the acromial extremity. From the motion which can be given to each end of the clavicle, the natural structure of the bone seems to be entirely destroyed.

This operation far surpassed in tediousness, difficulty, and danger, any thing which I have ever witnessed or performed. It is impossible for any description which we are capable of giving, to convey an accurate idea of its formidable nature. The attachment of the morbid mass to the important structure of the neck and shoulder of *the left side*, and to so great an extent, is sufficient to indicate its magnitude and difficulty.

The extensive nature of this operation, led us to take the precaution of securing the external jugular with a double ligature and dividing it between them. Though in operating upon the neck we have several times cut these veins without any unpleasant consequences, we however think we have witnessed almost fatal effects from the division of a large vein, and the admission of air into the circulation.

The case of Baron DUPUYTREN's, in which a young woman suddenly died under an operation, from the division of a large vein in the neck, whilst he was engaged in removing a tumour, contributed with my own experience, to make me take the precaution of previously tying the vein in this operation.

In an attempt which I made to remove the parotid gland in an enlarged and scirrhus state, the facial vein, where it passes over the

base of the lower jaw, was opened in dissecting the integuments from the tumour, in the early stage of the operation, before a single artery was tied. At the instant this vessel was opened, the attention of all present was arrested by the gurgling noise of air passing into some small opening. The breathing of the patient immediately became difficult and laborious, the heart beat violently and irregularly, his features were distorted, and convulsions of the whole body, soon followed to so great an extent as to make it impossible to keep him on the table. He lay upon the floor in this condition for near half an hour, as all supposed in *articulo mortis*. As the convulsions gradually left him, his mouth was permanently distorted, and complete hemiplegia was found to have ensued. An hour and more elapsed before he could articulate, and it was nearly a whole day before he recovered the use of his arm and leg. From a belief that these effects arose from the admission of air into the blood-vessels, which was not doubted by any person present, I instantly called to mind a set of experiments, which I made some twenty years since upon dogs, by blowing air into the circulation, by inserting a blow-pipe into a large superficial vein upon the thigh, and was forcibly struck with the similarity of result.

To the extraordinary composure of mind which our patient manifested, is to be attributed in a great measure his undisturbed and speedy recovery. No adverse symptoms of a general or local nature took place to interrupt the process of granulation in the wound. The immense chasm which was left, and such important parts as have been described, only covered with lint, necessarily occasioned me great solicitude, until I saw suppuration fully established, and the great vessels covered by granulations.

No difficulty attended keeping his shoulder in a proper position by the use of the common apparatus for fractured clavicle. With this he walked about without any inconvenience, after four weeks elapsed, and two months from the time of the operation, he was able to discontinue the sling, and by means of an apparatus contrived by Mr. James Kent, a most ingenious and inventive artist, to supply the want of clavicle, he was so fitted as to have his shoulder in its proper position, at the same time that the full motion of his arm was preserved.

New York, Sept. 24th. 1828, 25 Park Place.

ART. XII. *Case of Compound Dislocation of the Ankle-joint, with a Dislodgment of the Astragalus.* By S. POMEROY WHITE, M. D. of Hudson, N. Y.

ON the 18th of February ult. I was requested to visit David Roseter, aged twenty, who had a compound dislocation of the left ankle-joint. The accident occurred in consequence of the fall of a bale of hay upon the outside of the leg. The weight of the bale was estimated at five hundred pounds. Upon arriving at Stuyvesant, the patient's residence, I proceeded to the examination of the limb, and found a laceration of the integuments of about three inches in extent across the inner angle. The tibia was projecting inwards, the fibula had followed it, and the astragalus was thrown inwards and downwards, with its navicularean surface presenting at the orifice of the wound. The posterior tibial artery, and of course the deltoid ligament, were lacerated. Six hours had elapsed since the occurrence of the accident.

I first made simple extension and counter-extension. That made no alteration in the position of the bones, but brought on free hæmorrhage from the posterior tibial. Pressure was then made upon the astragalus during the extension and counter-extension with the limb flexed. That had no effect whatever, and I began to think of extracting the astragalus. Before resorting to that unpleasant expedient, however, I concluded to make another effort to save the whole. Powerful extension and counter-extension were then directed with the limb flexed; at the same time, by placing my left hand on the outside of the foot, while standing on the inside, and by forcing the tibia out with my right hand, the whole joint became reduced. About an inch of the posterior tibial was isolated, and hung out of the wound, which was divided and secured. There was no fracture of the fibula in consequence of its being forced inwards with the tibia and astragalus. The wound was dressed with adhesive plaster, and with lint moistened in blood. The limb was laid upon its outside in a flexed position, and rather elevated. Splints and bandages were not used. The subsequent symptoms and treatment have been politely furnished by Dr. E. W. STEVENS, the attending physician.

February 19th. "Rested tolerably well; little or no tumefaction; slight symptomatic fever; diet light.

February 20th. "Ankle swollen and painful; fever; pulse 90; use a wash composed of acetate of lead and muriate of ammonia.

February 21st. "Rested none last night; limb pretty extensively swollen and painful; pulse 100, and full; tongue has a whitish coat; venes. \bar{z} x; buffy coat; sulphas magnes. given; wash changed to acetate of lead dissolved in spts. and water, applied every hour. 9, P. M. Excitement high; venes. \bar{z} xii.

February 22d. "Visited in connexion with Dr. S. P. WHITE; limb continues to swell, and some discharge of synovia; pulse 120, and small, manifesting symptoms of high irritation; rested very little; cathartic operates powerfully; gave a Dover's powder which checked it; continue the wash as usual; at night another powder, and one grain of opium.

February 23d, A. M. "Slept soundly last night; pulse fallen to 84; limb less painful; commence giving strong beer freely; spt. mind., tinct. opii gutt. xv. every four hours. P. M. Tongue clean in its centre; thirst abated; pulse 100, but softer; paucity of urine to-day, with some pain in passing it; no appetite; at night a full dose of tinct. opii.

February 24th. "Rested none last night; imagining the pain, (which is now violent,) might arise from pus pent up in, or about the wound, I thought best to remove the lint, but no accumulation could be found. On removing the dressings these appearances were exhibited—the wound completely filled with coagulable lymph and new granulations; pulse varying from 84 to 106; Dover's powder; acetate of ammonia; tinct. opii.; beer, &c. continued.

February 25th. "Examined the case with Dr. S. P. White; wound looks well; discharges freely good pus; pulse 100, soft; omit all washes, as there seems to be no more inflammation than is necessary to renovate the part; gave \bar{z} ss. ol. ric. as there has been no evacuation since the 22d, and flaxseed tea internally, with warm fomentations externally, to relieve strangury; strong beer and water as usual.

February 26th. "Sits up in an easy chair half an hour in a day; sore discharges freely; but little painful; slightly tumefied; pulse 100; tongue clean; allow a more generous diet; dress the wound with dry lint.

February 27th. "Has had violent and deep-seated pains in the limb for the last twelve hours, which appears to be in the ligaments, as the external appearance does not indicate an increase of inflammation. Warm poulticing procured ease.

February 28th and 29th. "Pulse 100; an opiate at night procures rest; very little pain; appetite improves; eats any food; omit the beer, and substitute wine, of which a glass is taken every two hours.

March 1st. "Sore discharges freely; no pain of consequence; sits up an hour or two in the day; gave $\frac{z}{ss}$. ol ricini.

March 6th. "Takes bark, wine, &c.; apply red. precip. merc. to the sore occasionally; sits up a great part of the day.

March 10th. "Gaining rapidly; able to get from the bed to the chair alone; begins to move the joint.

March 15th. "Two-thirds of sore healed; walks with crutches.

March 30th. "Gone home to Richmond, (Mass.) sore mostly healed when went away; likely to regain the perfect use of the ankle-joint; it is now, and probably will continue to be for some time enlarged."

About a month after he left Dr. Stevens, I heard from him, and he was then recovering rapidly.

Hudson, May 31st, 1828.

ART. XIII. *Case of Bloody Infiltrations into the Labia Pudendi.* By JAMES GUILD, M. D. of Tuscaloosa, Alabama. [Communicated in a letter to Dr. DEWEES.]

I WAS called in haste, on the 10th of June, to see a robust, athletic negro woman, who, being just delivered of her fifteenth child, informed me that she got out of bed for the purpose of urinating, and there suddenly appeared, as she described it, a large knot in the groin. On examination, I discovered a tumour of the left labia, as large as a common child's head, which produced intolerable distress. I immediately made a longitudinal incision, the whole length of the tumour, with the shoulder of my lancet, and without hesitation extracted the entire contents, which was at least sixteen or twenty ounces of coagulated blood, which, in a great measure, alleviated the extreme anguish of the patient; having a poultice of charcoal applied, I left her. On my return the next morning I found her in great agony; on examination there appeared another tumour about the size of the former, though separate and distinct, and immediately below, extending down the adductor magnus femoralis muscle, I made an incision with my lancet similar to the one previously described, and by minute examination was not a little surprised to find two distinct cavities, the partition between was at least one inch and a half thick, and of firm muscular texture.

I extracted without hesitation the whole of the coagula from each tumour without the loss of one ounce of healthy blood, which put an end to the suffering of the patient. Hence I am of the opinion, that it is the proper manner of treating those suddenly formed tumours, to lay them open immediately and extract the entire contents at once. As there was not the least hæmorrhage in the present case, I am induced to believe that there is no danger from excessive hæmorrhage, by a too sudden interference in taking away the collected coagula.

By the constant application of the charcoal poultice, and keeping down inflammation by occasional bleeding and the saline purgatives, the wound healed very kindly, and in twelve days the parts were entirely restored without any sloughing or distress from inflammation; whereas if the coagulated blood were suffered to remain, and extracted in small quantities at each dressing, as recommended heretofore by writers on the subject, the consequence would have been extensive inflammation, gangrene, and mortification, particularly with cases that occur in the warm season. Perhaps it may not be considered wholly irrelative to mention in the present case that about the time of the formation of the tumours there appeared a varicose state of the veins extending down the inside of the leg from the pubes to the ancle, being the side the tumours formed on the labia pudendi, which explains the cause of those suddenly formed tumours of the labia of females, about or just after delivery.

Tuscaloosa, Alabama, July 15th, 1828.

MEDICAL EDUCATION AND INSTITUTIONS.

ART. XIV. *Sketch of the History of the Massachusetts Medical Society, with an account of their Medical Publications.* By E. HALE, M. D. Member of the Society.

THE different medical societies in our country exert a very important influence upon the condition of the medical profession, and through them upon the population of the whole country. Although possessing few of the insignia, or even of the direct attributes of power, they have had a most considerable, not to say the chief agency in all the improvements in the character and condition of the profession which it has undergone in the last twenty or thirty years. The medical institutions are indeed widely various, both in their character, and in the extent of their powers, in the several states. In some they appear to attempt little more than to superintend the police of the profession, regulating the admission of candidates for it, and watching the conduct of its members. In others, they are chiefly, if not purely scientific bodies, devising means for the advancement of professional learning. And in others still, these two objects are combined with a greater or less preponderance of each in the several cases. Their powers are as various as the objects upon which they are exercised, from the naked right to act as a corporate body, to the power of excluding from practice all who have not passed through a regular course of study, and undergone a thorough examination.

It would lead to a curious and interesting, and by no means an unprofitable inquiry, if we could trace out the history of these several societies in connection with the state and prosperity of the profession within their respective spheres of influence. We might then hope to ascertain in some good degree the nature of those institutions which are the best adapted to promote the advancement of science, among a people with habits and forms of government so different from those of the nations of the old world. But we have not now the means of pursuing this inquiry in respect to our medical societies generally, and shall only attempt it in reference to one of them, the Massachusetts Medical Society. This is, we believe, one of the oldest medical Societies in the country; and if it has not done so much as might have been expected of it, to obtain for itself a reputation among the learned societies of the age, it has not failed of accomplishing the less

brilliant, but not less useful and important object of contributing to the improvement of the profession within its own immediate sphere of action.

The Massachusetts Medical Society was first incorporated in 1781; and its powers were somewhat enlarged and more accurately defined by an additional act passed in 1789. By these acts the number of its members or fellows was limited to seventy; and its powers, besides the general power to hold property and act as a corporate body, extended only to the right to examine and license such candidates for the profession as should voluntarily offer themselves for examination, and to indicating a course of study for candidates for the profession. The license of the society conferred no privilege, and its recommendation of books imposed no obligation on students to read them, except on such as might offer themselves to the society for examination.

In 1803 the whole plan of the society was changed by another additional act of incorporation. The limitation of its number was removed, with the design of having the society extended, so as to include every respectable practitioner of medicine or surgery in the state; and measures were immediately taken to elect into it all whose character upon this principle, entitled them to admission. All who should afterwards be licensed by the censors of the society, or who should take a medical degree at Harvard University, were entitled, after three years approved practice, to be admitted fellows as a matter of right. The society therefore soon became what it continues to be, an association of all the medical practitioners in the state, who have sufficient character themselves to be able, or disposed to promote the good character of the profession. This act gave authority to establish district societies, with separate boards of censors as should become expedient. It also more distinctly defined the powers granted by the previous acts, and more clearly pointed out the duties which devolved on the society, and at the same time it conferred some new powers and privileges. These it is not necessary to describe particularly here, as they will sufficiently appear as we proceed. One provision, however, it may be proper to notice. By this act, the election and admission of fellows and honorary members, the election of officers, and the whole management of the funds are vested, not in the society itself, but in a board of counsellors chosen every year at the annual meeting of the society. So that in fact, the counsellors are a sort of legislature for the society for the management of its prudential concerns, to which is transferred, in reference to these concerns, nearly all its powers. This board is required by charter to meet at least three times a year.

We may also mention in this place, the privilege granted by this act to the fellows of the society, of exemption from enrolment in the militia. By the militia laws of the state, all physicians are exempted from the actual performance of military duty, on the condition of exhibiting their equipments once a year, and annually paying the sum of two dollars. But the fellows of the society are exempted even from *enrolment* in the militia, and the exemption being by charter, it has become vested in them as a right which cannot be taken away by any subsequent enactment, without the consent of the society.

In respect to some of its operations, the society may be said to have commenced from the date of the additional act of 1803; so greatly was it changed in its organization and character by that act. As a scientific institution, however, it is more than twenty years older. If we were to estimate the scientific character of the society by the extent of its publications, we should not indeed assign it a very high rank among learned bodies. It has, during the whole forty or fifty years of its existence, published only three volumes of medical communications, and five small parts, making a little more than two hundred pages of a fourth volume. But we should greatly under-rate the usefulness and importance of the society, if we were to estimate them by the number, or even by the character of its publications. However valuable may be the operations of such an institution in bringing together and publishing the observations of its members, for the general advancement of knowledge; those labours are scarcely less important, which tend rather to the dissemination among all the members of the profession, of that knowledge, which is already in the possession of some of the more learned of them. Nay, in some situations, such as was that of this country forty or fifty years ago, the labours of this latter class are much the most essential to the welfare, not only of the profession itself, but also to that of the whole community.

No one who is at all conversant with the state of the medical profession in Massachusetts, will doubt that its condition has been greatly improved since the establishment of the medical society, and especially since the extension of the society in consequence of the enlargement of its charter in 1803. Although there were among the physicians of that state, thirty or forty years ago, many men of science, and some who were distinguished for their learning and skill, yet as a body they were scarcely entitled to the appellation of a learned profession. A classical, or a scientific education, as a preliminary to the study of medicine, was neither required nor expected. Neither was any period or prescribed course of study considered necessary.

A young man left the plough or the workshop, as he was prompted either by indolence, or bodily infirmity, or caprice, and after spending a few months with some neighbouring physician, passed without examination or license to all the privileges of a regular member of the profession.

The present state of things is far otherwise. So entire is the change of opinion on this subject, not only in the profession, but in the general sentiment of the community, that no young man would any where be received as a physician, who could not produce his testimonials from some established medical institution. Indeed, it is not the least of the benefits resulting from the change which has been effected, that the profession is no longer answerable in its reputation for the ignorance and misconduct of uneducated pretenders to medical skill. Irregular practitioners we still have, and must continue to have amongst us. But they can no longer mingle in the society of educated, respectable physicians, and identify themselves with them. The line of distinction is so strongly marked between them, that they cannot by any possibility be confounded or mistaken for each other. On the contrary, they are to each other, so far as they are brought into contact, objects of mutual dislike and hostility. The consequence is, that although an irregular practitioner may sometimes so far succeed, as to acquire a certain degree of support, yet that support is generally very feeble and precarious; and he can never rise to any thing like respectability of standing in the community. Be his pretensions, or even his talents, what they may, without a regular and acknowledged education he is still a quack, and can never transfer himself from the class and standing of a quack, to those of a man of science.

In like manner, also the reputation of the profession is in a great measure secured from the effects of occasional misconduct among its acknowledged members. It will not be pretended, nor can it ever be expected, that even among those who have complied with the requisitions necessary to entering the profession regularly, there will be none whose conduct will be unworthy of the profession. But, although this should be the case, the disgrace will fix its stain upon the guilty individual, and not upon the profession as a body. The very fact, that his deeds are a violation of rule, proves that the profession, whose rules he violates, disapprove of the deeds themselves; while his own consciousness of disgrace, will generally cause him to shrink from identifying himself with those who would be dishonoured by acknowledging him.

It is another of the incidental advantages of the society, that it has greatly promoted cordiality and harmony among its members.

These are qualities for which the profession are not proverbial. The fact that a tribunal is established for the adjustment of differences, has a powerful effect in preventing them, although it is rarely, if ever appealed to for this purpose. Still more does the general diffusion of sound learning in the profession promote good fellowship among its members, by leading them to found their expectations of success upon true worth, rather than upon those arts which are the resource of the ignorant, and the never-failing sources of jealousy and discord.

But it is time for us to return from these collateral advantages of the society, to the more direct and immediate benefits of its operations. The leading object of its institution, was the promotion and diffusion of medical science among the members of the profession; and this object has been steadily kept in view in all its proceedings. And it has been, in no small degree, successfully accomplished. We hazard nothing in saying, that physicians in Massachusetts generally are much better instructed, and their patients much more skilfully attended, than they were twenty years ago, or than they would have been at this time, if this society had not been instituted. We have no extensive bills of mortality, which should exhibit in detail the evidence in proof of this statement; but we may safely rely upon the observation of every man who has given his attention to the subject, to support it.

We mean not to claim for the medical society the exclusive praise of all these improvements in the state of the profession. The general progress of education and learning have done much to encourage the advancement of medical learning; and the medical schools have greatly increased the means of acquiring professional knowledge. But the society has taken a lead in all the measures which have rendered a competent education indispensable to the reputable standing of every member of the profession. It has thus become a patron, and a powerful one, to the medical schools themselves, since it has extended the demand for instruction, by the necessity it imposes upon all its members and licentiates of being thoroughly instructed. This is the peculiar province of the society. Its powers in this respect, are ample; and they have been most efficaciously exercised. It is a well-established fact, that no man can attain any respectable standing as a physician in Massachusetts, or acquire any considerable portion of the public confidence as a practitioner, who has not first obtained the approbation of the medical society.

The means by which the society has accomplished its important purposes, are as simple as they are efficacious. The society has no authority to compel any one to undergo its examination; and it ex-

cludes irregular practitioners from the profession, not by penalties, but simply by withholding from them the countenance and support which it grants to its licentiates. By the original act of incorporation, of 1781, the license of the society conferred no privilege upon the candidate, and in no way distinguished him from other practitioners, except as it gave testimony to the fact, that he had voluntarily submitted to an examination, and passed it with approbation.

After the extension of the society, in consequence of the additional act of 1803, a by-law was adopted, declaring it disreputable and unlawful for any fellow of the society, to advise or consult with any person, who should thereafter commence the practice of medicine or surgery, unless he were either a fellow or licentiate of the society, or had taken a medical degree in Harvard University. This by-law has ever since remained in force, and constitutes the chief power of the society in excluding irregular practitioners. And for this purpose it is entirely efficient. The rule itself is so moderate and reasonable in its claims, that it affords no occasion for an excitement of popular sympathy in favour of any individual who may be excluded by it, by the charge of oppression or severity. In actual experience, the public sentiment has fully supported the society in executing it.

It thus appears, that it was the design of the institution, that the medical society, representing, or rather composed of, the whole body of the educated profession in the state, should have the entire control of the conditions for admitting candidates to the profession, and of the qualifications which shall be required of them. Once in three years the board of counsellors publishes a list of books, which candidates are required to have studied, and on which they are examined by the boards of censors, which now amount to four, in as many districts in different parts of the state. But this system, so simple and beautiful in theory, and indeed still efficient in practice, could not be carried into execution in all its simplicity. Previously to the commencement of its operation, there had been already granted to Harvard University the right to confer medical degrees, and of course the right to fix the qualifications of those who should receive them; and it was therefore necessary, in the enlargement of the society, to stipulate, that medical graduates of this university should be entitled to the same privileges, including the right to be admitted fellows, after three years approved practice, as were granted by the society's license. Thus were two avenues to the profession opened at the same time. An attempt was made at an early period, to bring about such an union between the two institutions, as should, in fact, connect the two avenues into one, but it failed. The requirements of the two in-

stitutions, however, though not precisely the same, are entirely similar. Each requires all the substantial parts of a thorough professional education. It is highly probable that all the discrepancy that remains, will, at no distant period, be done away.

Another encroachment upon the simplicity of this system, has arisen at a later period, in consequence of a distrust of its efficacy, before sufficient time had been allowed it to exhibit its energy. Although measures were adopted, immediately after the authority to do it was granted, to nominate, and elect into the society, such practitioners as were, by their character, fairly entitled to a fellowship, as fast as their merits became known, yet it would obviously take a long time before all, in the more distant parts of the state, could thus be sought out and elected. Another considerable period must be consumed while these members should become accustomed to their new privileges and duties. In the course of ten years, the society increased from seventy to about three hundred members. A large proportion of them, although worthy and respectable practitioners, were little accustomed to act in concert, and little aware of the full extent of the power, which a combined action would give to the profession without doing violence to the rights of any. In this state of things, and in a feeling of impatience, produced by some empirical proceedings in a remote part of the state, the legislature, in 1818, passed a law to regulate the practice of physic and surgery, requiring the society to appoint examiners in every county, and prohibiting any practitioner from collecting his fees by law, who should afterwards go into practice, without having been first examined and licensed. This law, it should be remembered, was passed not only without any solicitation of the medical society, but in opposition to their wishes. It contained some provisions which they were unwilling to execute, or rather which in their nature could not be executed. They therefore applied to the legislature, and the following year obtained a modification of the law. It still, however, retains the provision depriving unlicensed practitioners from collecting their fees by law. This provision is, in effect, nearly, or quite inoperative, and is therefore in itself of little consequence. It is, nevertheless, a material blemish to the beauty of the system of medical polity of the state, and it has been the occasion of introducing another anomaly, which may at some future day be of more importance.

Within a few years a new medical school has risen up in the interior of the state, with the power to confer medical degrees. By the principles which we have already explained, the pupils of this school should be subject to examination and license by the censors of the

Medical Society. And so in reality they are; but as the legislature have exempted them from the operation of the act of 1819, just mentioned, they seem in some instances to have supposed themselves entitled to the privileges of licentiates of the society, in the same manner as our medical graduates of Harvard University. There is however, a gross fallacy in this expectation; for although the law allows them to practise and to sue for their fees, yet, in regard to the Medical Society, they stand upon the same footing with other unlicensed practitioners, with whom no fellow of the society is permitted to advise or consult.

All these different circumstances, however, appear to assume a much more important influence upon the society in theory, than they are capable of exerting upon its actual operations. Thus the number of graduates of the Berkshire Medical School, who have settled themselves in the state without a license from the society, is too small to interfere effectually with its regulations, and they will consequently soon find both their interest and their duty united in compelling them to conform to them. The law of 1819, will then be but a dead letter. And in regard to the Medical Institution of Harvard University, there is too much conformity of principle between it and the society, and too much co-operation in their designs for promoting sound learning, to endanger the relations between them.

It results from this sketch, that the principle to which the Massachusetts Medical Society owes all its efficiency, is the confidence placed in it by the community, that its officers will not, on the one hand, give countenance to any practitioner of medicine who has not acquired such an education as should entitle him to support, nor on the other hand, withhold it from any who are thus qualified. This is the true secret, if it may be called such, of all the society's power. We might go on, and show by a comparison of the success which has attended the application of these principles, with the effects of the more coercive measures adopted by some of the medical societies in Europe, that these are not only more consonant to the spirit of our free institutions, but also more efficacious in producing the result desired of them than any others that have been tried. But we have not time to pursue this topic, for we must take a brief notice of the publications of this society.

These, as we have already remarked, are not numerous; few and far between. They consist either of the dissertations read at the annual meetings of the society, or of communications voluntarily offered by the fellows for publication, or, as in one or two instances, of the reports of committees, which were appointed to investigate the

subjects referred to them. These papers are of course extremely various in their character and degree of excellence. In general, those of the last mentioned class are the most valuable, and those of the first the least so. The discourse read at the annual meeting, partakes in some small degree of the character of a popular address, and so far is not well suited to a thorough discussion of a subject purely scientific. Of late years, the communications have dwindled to a mere publication of this annual discourse. This fact, which at first view seems so disreputable to a society so numerous, respectable, and in many respects active, is to be explained by the great number of periodical scientific journals, which give employment to the talents and activity of the more enterprising portions of the profession, and which by their prompt appearance, and the compensation they give for original papers, furnish stronger inducements than have been held out by the society for the tardily published and unrequited productions of its members.

These considerations will not apply in future, and it may fairly be presumed that the society will be able to execute the design, which has been recently declared, of publishing a half volume annually. At the late meeting of the counsellors in June last, they voted to offer a compensation of one dollar for each printed page, for such medical communications, furnished by fellows of the society, as shall be approved for publication, by a committee consisting of the President and the two Secretaries. If more than sufficient for a half volume of two hundred and fifty pages should be offered, of such communications as are worthy of publication, the committee are to make a selection of the most valuable papers, and award the compensation accordingly. This measure offers to the fellows of the society inducements to write for its publications, as powerful as are afforded by most of our periodical journals; besides the feeling, which it is to be taken for granted they are not wanting in, of ambition to promote its prosperity and honour.

The first publication of the society was made in 1790. It was a pamphlet of one hundred and twenty-eight pages, made up chiefly of short papers, containing the remarks of the authors upon detached cases, with very little attempt at elaborate generalization or theory. Some of them exhibit much acuteness of observation, and a diligent attention to the rapid progress of professional science, as cultivated by others in their time. They are therefore curious and interesting, as connected with the history of the improvements in the profession, although those very improvements have long since anticipated them as practical instructors. The first article is an account of the weather, and of

the epidemics in the town of Salem, in the year 1786, by Dr. HOLYOKE. The venerable author, although then old enough, and of sufficient standing to have been the first president of the society, is still living, (at the great age of a hundred years,) and still able to take an interest in the advancement of the profession, of which, during nearly three-quarters of a century he was a successful practitioner. His meteorological journal, which has been continued through nearly or quite the whole of this period, has a considerable portion of it been published by the American Academy of Arts and Sciences, and the remaining series is in their hands for publication.

The second article is a short account of an epidemic sore-throat in the town of Dighton, in 1785 and 1786, and contains nothing that requires a particular notice. Then follows an account of some trials with a new remedy, (long since forgotten,) for epilepsy, the cow parsnip, (*Heracleum lanatum*.) It was about as successful as most of the many other specifics for this formidable disease, having given relief in three out of five cases. The most remarkable part of this paper is the fact related that to one of the epileptic patients, "the good woman," had administered the whole of a human placenta dried and powdered, of course without effecting a cure.

The two next papers give some of the earlier examples of practices in surgery which have long since become well established; the treatment of curvature of the spine by issues, and covering the stump after amputation with the natural integuments. There can be no more striking illustration of the rapidity of the improvements in modern surgery, than the fact that these modes of treatment were so recently new to men of extensive learning and experience in the profession. The same remark will apply with equal force to the twelfth and last article, which is an account of tying the crural artery with a successful result. The intermediate papers are such as to have possessed some interest at the time, but do not now demand attention. When this publication was made, there was no such thing known as a medical review, and no medical journal was published in New England. It was therefore a useful appendix to it to give some extracts from RIGBY on Uterine Hæmorrhage, and from several other works, which were then scarce and of practical utility.

The society made no further publication until 1804, and then only published the dissertation read before the society by Dr. RAND at the annual meeting. It was on phthisis pulmonalis, and on digitalis as a remedy in that disease. This was followed in 1806, by a longer pamphlet, containing six articles; the annual address by Dr. FISHER, who was afterwards many years president of the society; a case of rup-

tured uterus; a case of compound dislocation and fracture; a case of retention of urine; case of a wound and of tying the femoral artery; and a paper on worms in different parts of the body. The case of the femoral artery again reminds us of the rapidity of the improvements which surgery has undergone. So lately as 1806, it was still a problem in the minds of many, whether so large an artery as the femoral, could be tied with safety to the limb. Indeed, in this case, the surgeon, Dr. WARREN, was not able to convince the patient and his friends of the danger of the wound, and the comparative safety of the operation until it was too late, and the result was fatal.

In 1808, another collection of papers was published, which complete the first volume. It is made up chiefly of short histories of cases, which although in general curious, do not admit of being condensed into an abstract such as our limits require. Indeed, a mere relation of cases is of little value in promoting medical knowledge. When a variety of analogous cases is brought together so as to establish some principle, or to direct to a correct method of practice, they become of the greatest importance. But when an author does nothing more than to relate the history of his case, without connecting it at all with the knowledge already existing on the subject to which it relates, although his facts may be curious and interesting, his paper scarcely deserves to be ranked even with the humblest efforts for the advancement of the science. These remarks apply to the greater part, but not to all the papers in this portion of the communications under consideration. There is the history of an operation for strangulated crural hernia, with practical remarks by Dr. Warren, which must have been highly valuable at a time when the true practice was much less generally known in this country than it is at present. There is also a still more elaborate paper by Dr. GORHAM on the *Lytta vittata* or potatoe-fly. The discovery of the medicinal properties of this insect, so entirely similar in all respects, as Dr. Gorham found them in a variety of trials, to those of the true cantharides, seemed at one time to promise the greatest benefits to our country, when the difficulties in the way of our intercourse with Europe rendered the foreign fly scarce and expensive. But since commerce has been restored to its former channels, the attempts to gather the domestic fly appear to have ceased; and the fact that an insect so unlike in appearance, possesses the same medicinal virtues, both for external use and internal administration, as the genuine cantharides, remains rather as a curiosity than as a matter of present practical interest.

But by far the most valuable paper in this publication, or indeed

in the whole volume, is the appendix. It is the report of a committee appointed by the counsellors on the 3d of February, 1808, "to inquire into the present state of the evidence respecting the prophylactic power of the cow-pock, and to report such measures as they may find to be expedient for establishing the practice on a safe foundation;" and was read to the society on the 1st of June of the same year. This report brings together a great body of evidence to show the efficacy of vaccination as a preventive against small-pox, and examines the objections which had been made to the practice, showing how some of them may be fully obviated, and the force of others materially diminished.

It is worthy of particular remark, as showing the industry and research with which this report was prepared, and the acuteness of observation and sound reasoning of its author, that the influence of cow-pock in producing a modified small-pox or varioloid, as it has since been called, in the few cases in which small-pox is not wholly prevented by it, is distinctly asserted on evidence drawn from WILLAN, ADAMS, and others. This fact is now sufficiently well established, but it was wholly overlooked or forgotten for fifteen or twenty years after it was clearly announced in this report; until it came up again as a new discovery in consequence of the spread of small-pox, first in Great Britain, and then in this country. Indeed, we do not appear to have had, until within these last few years, such a period as Mr. GOLDSON required as the only sufficient test of the efficacy of vaccination, when he remarked that "the full extent of the powers of vaccination can only be ascertained when the small-pox shall again become the prevailing epidemic. When the state of the air shall again be so far variolated, that seclusion can be of little avail; then will be the time to prove how far the security vaccination gives will extend." Such a test we have now had, and upon a most extensive scale. No one who has observed with what readiness the small-pox has broken out in almost every part of this country as well as in Europe, and with what frequency it has shown itself in the unprotected in its worst forms, hurrying to a fatal termination, we think, can doubt that a disposition to this epidemic has prevailed within the last few years to such an extent as would, but for the protection afforded by vaccination, have produced the most terrible consequences. And if the result of the test has been somewhat less favourable, the protection less complete than the more sanguine of the promoters of vaccination anticipated, yet when we compare the result with the alarm and ravages of former epidemic periods, we have

abundant reason to rejoice, and to promote a practice which has prevented so much suffering, and preserved so many lives.

From the following extract it would almost seem that the committee had actually foreseen the occurrences of the last few years. "From the evidence which has been furnished to the public," says the report, "it appears unquestionably that very many persons, who have been supposed to be secured from small-pox by vaccination, have been subsequently affected with small-pox in a degree more or less severe; although the occurrence of that disease under such circumstances, has very rarely been followed by death. From the number of instances of this sort, which have already been made public, there is reason to believe that very many similar ones will occur, unless prevented by seasonable caution. To whatever cause these events may be attributed, it is not to be presumed, that we shall be exempt from similar misfortunes in this country, unless we provide against them; and as they would probably take place during the general prevalence of small-pox among us, and would therefore, happen many of them at the same moment, they would be peculiarly distressing."

A very large proportion of the cases of small-pox after vaccination, or supposed vaccination, the committee attribute to the imperfect manner in which the cow-pock inoculation was performed; especially in the first years of its introduction, before its character, and the precautions which it required, were fully known, and when the simplicity of the operation, and the mildness of the disease led many uneducated persons to practise vaccination. They relate some remarkable examples of inattention and ignorance in these respects, which were followed by very deplorable consequences. These evils may be obviated in future, by making it extensively known, that however simple the operation itself, there are circumstances connected with the disease which require the best skill of an educated physician to pronounce in all cases upon its genuine character. This has in a great measure been already done. Few persons, we believe, are now disposed to vaccinate themselves or their children, for the sake of saving the physician's fee.

The committee were aware, as the whole profession have since been, that this made but a part of the case. "It is however, true," they say, "that all the cases of failure cannot be referred to ignorance in the inoculators; and that the small-pox has appeared with a character more or less strongly marked, even in those who have been vaccinated by regular practitioners of medicine: and indeed by practitioners who have had much experience, and been well informed

on the subject of cow-pock." Of this fact they then give the evidence, in a variety of cases from Willan, the Medical and Physical Journal, Medical and Chirurgical Review, and others; and add the following remark. "It should, however, be noted, that in most cases where the vaccine has exhibited its proper characters, the subsequent variolous affection is evidently modified, and rendered much more mild by the vaccination. In short, where the small-pox has not been prevented by the vaccine-pock, it has not been disarmed of its terrors." The truth of this observation has been so fully established within these few years, that it seems not a little remarkable that it should have attracted no more attention at the time it was made. It is twenty years since this committee came to this conclusion, drawn from a thorough examination of all the evidence which the disease had then afforded. But it is only a short time since the world at large, or even the profession generally, were aware that any such modification of small-pox can be produced by cow-pock; and yet at the present day, perhaps no fact in medical science is more universally acknowledged.

The report next proceeds to show that the same thing is true of small-pox; that although it is the general law of the disease, that the constitution which has once been affected by it, is not again susceptible of it, cases do sometimes occur of a second infection. Several such cases are related from different authors. In two of them the second attack proved fatal; but in general, the same effect was noticed in modifying the disease, as in the case of cow-pock.

It is not necessary for us to follow the committee in their answer to the various objections which had been urged against the practice of vaccination. The experience of twenty years, which is now added to that of the eight or ten which had preceded their report, since this practice was first introduced to the world, has fully confirmed the correctness of their views, and long since rendered any further consideration of the subject, in this point of view, unnecessary. The principal difficulty was then, still more than it has since been, to ensure that all who are vaccinated should have the genuine disease. The committee follow the London Original Vaccine-pock Institution, in recommending a second vaccination as a test of the genuineness of the first; and they particularly recommend, with Dr. Willan, that all who had passed through the disease, during the two or three first years, before its distinctive characters were well known, should submit to this test.

This proposal to vaccinate a second time, should not be confounded with a proposition which has been recently made, to re-vaccinate for

the purpose of destroying any remaining susceptibility to small-pox which is supposed to exist, even after a perfect vaccination. Not only is the object of the proposed re-vaccination entirely different, but it rests upon the supposition of an entirely opposite state of facts. The recent proposition supposes that in a large proportion of cases, (one in twenty,) the system is capable of going a second time, through a perfect form of the disease. Whereas the committee found their recommendation of a second inoculation, as a test of the efficacy of the first, upon the fact, that a second perfect disease is of such rare occurrence as to render inoculation with vaccine matter, as sure a test of the genuineness of the first disease as inoculation with small-pox. They quote in detail from the minutes of the London Original Vaccine-Pock Institution, published in the *Medical and Chirurgical Review*, several cases in which the trial was made by inoculating one arm with small-pox, and the other with cow-pock, of patients who had previously had genuine cow-pock. The following is the result as quoted from the same minutes. "According to these trials which seem to confirm several hundred others already instituted by this establishment, the constitution is alike susceptible or unsusceptible of the small-pox and cow-pock; of course the matter of the latter may be relied upon as a test, as much as that of the former. However, as the local affection of the cow-pock without constitutional disorder, not unfrequently resembles the cow-pock attended by constitutional affection; and as in a certain proportion of cases, the small-pox can take place after distinct cow-pock, as well as the cow-pock; it has been asserted that a person is susceptible repeatedly of the cow-pock, though not of the small-pox, and in this way the error may be explained." So confident were the officers of the institution, of the efficacy of this test, that it is stated by the report, they gave to each individual who had submitted to it, after being first vaccinated at the institution, a certificate that he had undergone the vaccine disease, with a promise that if he should afterwards take the small-pox, the institution would pay him the sum of five guineas.

We shall make only one more extract from this Report. "The committee are aware, that few persons in this country are prepared to hear from this society, that the vaccine disease is not, in all cases, a perfect security against the small-pox, and they presume it will be feared by some that suggestions of this sort, which must accompany any remedy that shall be proposed, may deter our fellow citizens from submitting to vaccination, and thus deprive us of the security which this practice will undoubtedly afford. But the committee feel assured that this society cannot desire to make any statement on

this subject, which is not perfectly accordant with truth; and that the friends of vaccination can have no interest other than that of diffusing a most important blessing, under such precautions that it shall not be alloyed by any future disappointments." This same apprehension of weakening the public confidence in the efficacy and value of vaccination, has in our day often been made an argument against a free discussion of this subject. But in a community like this, it should be remembered, the public confidence is not to be obtained nor preserved by concealment. Let the whole merits of the case be fully made known, and the great body of the people will not fail to estimate pretty correctly its value. Although it be true that vaccination affords a less universal protection than was formerly supposed, yet it is only necessary to make known the true extent of that protection, as compared with the history of small-pox itself to furnish sufficient inducements to all to undergo the cow-pock inoculation. It appears from a late report of the National Vaccine Institution, published under the sanction of some of the first names in the profession in Great Britain, that the proportion of those who take the small-pox in its modified form, after vaccination, is not greater than that of those who died of inoculated small-pox, when inoculation with that disease was practised. This proportion is elsewhere stated at one in two hundred and fifty. Let it be remembered in this connexion, that less than one in a thousand die of modified small-pox after cow-pox, and we are brought to the conclusion that less than one individual in two hundred and fifty thousand vaccinated persons, die of small-pox; and let this fact be remembered too in connexion with the opposing fact, which rests we believe on undisputed authority, that before the benefits of vaccination were made known by Dr. Jenner, one out of every six who were subjected to small-pox died of that distressing and loathsome disease. So far was the first publication of the fact that a modified small-pox does sometimes occur after vaccination, from diminishing the public confidence in the cow-pock, we believe that this report did much to increase that confidence, particularly in Massachusetts, and to extend the practice of vaccination. Indeed it seems to have been chiefly owing to the fact that the confidence in this disease was so entire as to prevent discussion in regard to it, that the doctrines advanced in this report attracted no more attention when it was first published. We have dwelt thus long on this report, not merely on account of its intrinsic merits, but because the subject is one of peculiar interest at the present time. We must pass hastily over the remaining publications of the society.

The second volume was published in three parts; the first in 1809,

the last in 1813. It is made up of nineteen articles, two of them not original. Article I. is on the lymphatic swelling of the inferior extremities of puerperal women, by JAMES MANN, M. D. II. Observations concerning the influenza of 1807, by JAMES JACKSON, M. D. III. Facts relating to the small-pox and cow-pock in Providence in 1808, by Dr. BOWEN. The two next articles give cases of epilepsy and of ovarian dropsy. In article VI. we have an account of an epidemic in Medfield in 1806; the same which afterwards attracted so much notice, and gave so much alarm under the name of spotted fever.

Article X. is entitled cases of organic diseases of the heart, with dissections, by JOHN C. WARREN, M. D. It is a highly valuable paper, giving ten cases, with the appearances exhibited on dissection, illustrated by engravings, and with practical remarks. It is not a little remarkable that a disease which must, from its nature, have always existed, should formerly have been so little known, or so confounded with affections of other organs. When at length it was brought to the attention of the profession, there was for a time an extravagance in running into the opposite extreme. Physicians sometimes found diseases of the heart in mere nervous palpitation, and predicted death in some cases where there was little real disease. This is perhaps the reason that so much less is said of this class of diseases now than a few years ago. The paper of Dr. Warren does not admit of being condensed into an abstract. It is a clear, concise history of the several cases, and furnishes a body of most useful knowledge.

In 1810 the spotted fever, whose first appearance in the country we have already noticed, had extended itself to so many places, and produced so much alarm, that the counsellors of the society were induced in March of that year to appoint a committee to investigate its character, causes, &c. This committee prepared a series of inquiries, and addressed them in a circular letter to those physicians who were conversant with the disease, and reported to the society in June. This report gives the history and symptoms of the disease as furnished by the answers the committee received, and from such other information as they could obtain in so short a time, without having themselves seen the disease, unless in a very few instances, and then the views of the committee respecting the character of the epidemic, and of the best mode of treatment. Few diseases have given rise to more opposite opinions, or received more dissimilar treatment than this. The course recommended by the committee is in some respects a middle one. This is altogether natural, since being at a distance from its ravages, they could more coolly form

their opinions, and were less exposed to run into either extreme. The report is an able and elaborate production, and although the description wants something of that vivacity which it would have received if the members of the committee had been personally familiar with the disease; it is on the whole, one of the best papers that have been written on this terrible epidemic.

After the report on spotted fever, we have a dissertation read at the annual meeting, on the progress of medical science in Massachusetts, by JOSIAH BARTLETT, M. D. and then several short articles on particular remedies; a dissertation on heat and cold; and another paper on spotted fever; and at the close of the volume a more elaborate article by John Warren, M. D. then president of the society, on the mercurial practice in febrile diseases. Dr. Warren first gives a history of the introduction of the preparations of mercury into practice, then investigates their modes of action, and describes the cases to which they were applicable. It is curious to see how short a time a medicine of such general and efficacious application has been in the hands of the profession. Dr. Warren relates the following anecdote to show the prejudice that existed so late as 1774, against its use even in small-pox, in which it was adopted much earlier than in most other diseases. "Dr. LATHAM professed to practice the Suttonian plan of inoculation, which was given out to consist in a mode of preparation in which no mercury was used. On the faith of this supposition, a large hospital was filled with patients in a neighbouring town, and several classes passed through the distemper with about the usual success. One of the persons in the hospital suspicious of his having taken mercury, had some of the pills which had been given to him analyzed, and a quantity of quicksilver was revived from them. Information of this circumstance getting to the ears of the public, a general indignation was excited against the inoculator, as using a noxious and deleterious medicine, and the business of inoculation was soon after suspended."

For a long time mercury was given secretly, and in very small doses. "One or two grains a day," says Dr. W. "was as much as was considered safe in violent diseases, and even by that quantity the constitution was suspected to be weakened, and whatever disease happened within ten or fifteen years after the use of it, was imputed to the influence of this medicine." Dr. W. gives to Dr. CHISHOLM the credit of having first relied chiefly upon mercury as a remedy in yellow fever; and this was so late as 1793. The remarks on the use of mercury are eminently judicious and practical, the result of long experience and accurate observation.

The third volume of the society's communications was published in two parts, in 1819 and 1822. The volume commences with a dissertation on pneumonia, read before the society in 1808, but not published till this time, by JOHN BROOKS, M. D. afterwards for several years governor of Massachusetts. This is followed by a dissertation on cynanche trachealis by RICHARD HAZELTINE, M. D. read at the annual meeting in 1812. These are both practical treatises, which do not develope any peculiar theory or mode of practice. The dissertation of the following year, however, has been the occasion of introducing into established practice throughout the world, a new and most important agent in medicine. This is the paper by OLIVER PRESCOTT, M. D. on *secale cornutum*, or ergot, which was read to the society June 2, 1813. We are thus particular in regard to the date, because since the value of ergot has become well known, the credit of having introduced it into notice has been claimed for those who were much later in acknowledging its virtues. Dr. Prescott does not pretend to have been the first to discover the peculiar properties of this medicine, but assigns to Dr. STEARNS the credit of having first made them known in a paper published in the New York Medical Repository. He, however, investigated the natural history of ergot, and carefully observed its medicinal qualities; and it is chiefly to his labours that the world is indebted for the knowledge of its value. He did not confine himself to a careless observation of its general effects, but with much discrimination pointed out the cases to which it is adapted, and when it is to be avoided. We are told in Dr. THATCHER's American Medical Biography, that this dissertation was reprinted in Philadelphia and London, and was translated into the French and German languages; and was published in full, so far as relates to the medicinal properties of ergot in the *Dictionnaire des Sciences Medicales*.

Several of the remaining articles in this volume are worthy of a more extended notice than we are able to give them, for the length of this article admonishes us that it is time to bring it to a close. Dr. Jackson's dissertation on fever, and Dr. Warren's "comparative view of the sensorial and nervous system in man and animals," are worthy of the high reputation of their authors; but we cannot enter upon an analysis of them at the close of a long article. In April, 1815, the president of the society, Dr. John Warren, died, and the counsellors appointed Dr. Jackson to deliver an address at his funeral. This eulogy makes a part of the present volume. It is an eloquent delineation of the character and virtues of its distinguished subject.

For several years past, the publications of the society, although more

frequent than formerly, have been small. Five pamphlets, as parts of the fourth volume, have been published, containing the annual dissertations for the last seven years. One of them is an eulogy on the late Governor Brooks, who was president of the society at the time of his death, and the others are discussions of some medical topic; but it must be owned that they do not add much to the stock of professional learning. For many years past the only communications have been the annual discourses; and so long as this continues to be the case, a large proportion of the publications will possess but a very moderate value. It may be expected, however, that the inducements which are now offered for more elaborate communications, will not fail of producing a half volume of some worth the next year.

We must, however, again remark, that making books is not the leading object of the society. Had the society never published any thing, it would not have at all failed in accomplishing the great purposes for which it was established. Of what it has published, although some of its papers will never be read enough to be forgotten, there are others which will ever be regarded as valuable contributions to medical science.

Boston, July, 1828.

REVIEW.

ART. XV. *On the Nature and Treatment of Tetanus and Hydrophobia, with some Observations on a Natural Classification of Diseases in General.* By ROBERT REID, M. D. Licentiate of King and Queen's College of Physicians in Dublin, Member of the Royal Medical Society of Edinburgh, &c.

THIS is a work to which we cannot attach much value. It is a very slim, jejune, and penurious production, exhibiting a mere sketch of the history of the diseases of which it purports to treat, and even this not executed in the best manner. But it contains the modern views of the pathology of these terrible affections, with which some of our readers may be interested, and this constitutes its chief claims to our attention. Every writer, however, is to be judged, according to an old maxim, by his design—and perhaps the preceding remarks are not just to our author, since he may have aimed at little more than he has performed, and we are willing, with our usual spirit of benevolence, thus to consider the case, and to retract altogether, or soften the severity of our strictures. What he has omitted, we shall endeavour in part to supply, and present a sort of synopsis or digest of the existing state of our knowledge in relation to the subject. Inverting the arrangement of the work, we shall first apply ourselves to the discussion of hydrophobia, and from the copiousness of the matter before us, it will probably occupy as many of our pages as we can now conveniently appropriate to it, and hence we may be compelled to postpone to a subsequent occasion, our observations on tetanus.

The term hydrophobia, which means an aversion to water, does not strictly designate the disease. Cases have frequently occurred of it, without any such dread or dislike of that or other fluids. It has perhaps with propriety been remarked by MEADE, that it should have been called *Δυσκαταποσις*, a difficulty of swallowing, rather than *Υδροφοβία*, or dread of water. Be it as it may, that title is still inappropriate, as derived from a solitary symptom, instead of the general character of the disease. Being more prevalent among dogs, it is also called rabies canina. As however other animals are occasionally the subjects of the disease, a more comprehensive name should be conferred on it. But since that of hydrophobia seems now to be conventionally adopted, we shall retain it in the ensuing inquiry.

The curiosity commonly entertained regarding the origin of diseases, excites a regret that the early notices of them are often involved in obscurity. Those who contend for the antiquity of hydrophobia, cite certain passages from HOMER, in which the figure of canine rage is employed to illustrate the vehemence of turbulent and exasperated passion. But these passages seem to refer rather to the ordinary fury of that animal than to any specific madness.

Neither by HIPPOCRATES nor CELSUS, or by any other writer of these periods is the disease mentioned. It is said, though we never could find it in his works, to be noticed by ARISTOTLE. CÆLIUS AURELIANUS, who lived much later, is the first authority who distinctly treats of it, and from his having entered into a long discussion of the question, whether hydrophobia was a new disease or not, it is presumable that it had attracted little attention previously. It is asserted by PLUTARCH and LE CLERC that it originated in the time of ASCLEPIADES, who lived in Rome from the beginning to the middle of the first century. But this is questionable. Equally uncertain are several other points connected with the history of the disease, and among which, not the least interesting, is the mode in which it originated. Did it primarily arise from a specific contagion, on which it continues to be dependant, like variola and similar cases, or was it generated, and still is occasionally, by some general causes? The former is the common and best sustained opinion, though there are not wanting some who hold the opposite view of the subject, and hence the disease has been divided into traumatic and spontaneous, as excited by a peculiar virus inserted in a wound, or as proceeding from ordinary morbid agencies.

Nor is it determined with what class of animals it commenced, or to which it is restricted. The former point it is idle to discuss, and as for the latter, all we know with certainty is, that besides the human species, it is met with in the canine, the feline, the equine, the bovine, and particularly in dogs. To these BOERHAAVE adds poultry as sometimes affected, which seems contrary to common experience. The disease however may occur in other animals, eluding our attention from the slender opportunities afforded of observing it in their wild or undomesticated state.

There is much reason to conclude, from a review of the most familiar and authenticated facts, that it commenced in dogs, and has ever since in the human subject undoubtedly, and probably in all other instances, been communicated by a virus, the result of a specific secretory process peculiar to the canine race. No other animal has the faculty of reproducing the contagious matter. Cases indeed are recorded, one of which

came under our own care, where the disease was supposed to have been excited by the bite of a rabid cat. But as such instances are of rare occurrence, which would not be so, from our constant exposure to that animal, had it such a power, it may be presumed that it was otherwise acquired, or was mistaken for some of those nervous affections, sometimes very closely imitative of hydrophobia. It is reported, we are aware, that it has been communicated to other animals by MAJENDIE and BRESSLET by inoculation with the saliva of a man in the disease, and that a similar result was produced by Mr. KING, from that of a rabid cow inserted into a fowl.* But this is improbable in itself, and is rendered still more so, as being in contradiction to similar experiments made by other persons.† The apparatus in the dog for the secretion of saliva is very peculiar, and by virtue of which it may be presumed it exclusively possesses the faculty of elaborating this virulent product.

By what single or combination of circumstances it had its origin, it were vain now to inquire: but we are not without grounds to suspect, that though at present it may not be generated, *de novo*, there are causes which predispose to or excite this disease, and at all events, promote its prevalence in dogs.

1st. *Confinement of these animals in narrow, hot, and ill-ventilated places.*—It is notorious that packs of hounds thus situated, and even a single dog habitually chained and kennelled, is liable to become affected.

2d. *Diet either scanty or putrid.*—BOERHAAVE and his commentator, VAN SWIETEN, are decidedly of this opinion, and YOUNG, in his *Annals of Agriculture*, says, “that canine madness chiefly arises from the number of ill kept and ill fed dogs.” It is affirmed that formerly when horses and other animals which died in this city were thrown on the commons unburied, and dogs fed on the carrion, rabies was frequent, which has comparatively ceased since the discontinuance of the practice. The same has been remarked after battles in warm climates, and it is known, that in the season of the fisheries on our great water courses, especially on the Potomac, where large quantities of fish are permitted to remain to putrify, that the disease to a greater extent is an usual consequence.

3d. *Deficiency of water.*—An impression of the influence of this cause is so strong that it has attracted legislative interposition, and provisions have been made accordingly in some of the West India Islands, for a supply of it at certain periods of drought.

* Medical Gazette, No. 27, July, 1828.

† Hunter, Arnold, &c.

4th. *Extreme Heat*.—The connection of the disease with a high degree of temperature was observed by some of the earliest writers on it, and we believe that our own experience teaches that it prevails almost exclusively in our hot weather. But such is not the case every where. As to the West Indies, it is difficult to determine the point. By HILLARY it is considered as endemial to the tropical regions, while other writers as MOSELEY, &c. of equal authority, represent it as of the rarest occurrence. On the continent of South America it is said not to be known—the same is asserted by VOLNEY as to Egypt and Syria, and by BARROW with regard to the Cape of Good Hope. But these were travellers, whose observations, hurried and deficient, are not always to be trusted.

5th. *Epidemic Distemperature of the Atmosphere*.—Not a few very interesting facts are collected by WEBSTER, showing the simultaneous spread of the disease with pestilential fevers, as well here as in other countries. But the most conclusive evidence on this point is given by MOSELEY in his work on tropical diseases. He states that “in the spring of 1783, hydrophobia broke out in Hispaniola, and subsequently in Jamaica, and raged in the latter island to a wide extent till the next year. It seemed to be dependent on a vitiated state of the air, since the disease was general, and many dogs were seized with it that had no communication with others, and some dogs that were brought from Europe and North America, and which were not on shore, went mad on their arrival in the harbours.”

Notwithstanding what may be found to the contrary as regards its spontaneous origin in the human species, there is not the slightest proof deserving of confidence.* It is however true, that in many diseases, as malignant fevers, where the cerebral and nervous systems are much disordered, and more especially in the neuroses, as hysteria, epilepsy, and tetanus, as well as in certain forms of gastritis, great difficulty of deglutition occurs, attended by an exquisite sensibility, betraying an intolerance of light, or noises, or fluids, or even of a draught of air. But such cases are essentially different, and it would require a very vague and sweeping generalization indeed to comprehend them under the same denomination, and in violation of every rule of nosological distinction and arrangement.

* By most of the old writers this opinion was maintained. Cælius Aurelianus, and Aretæus are very explicit on the point, and Boerhaave says “that though more commonly produced by derivation, yet it appears both from history and observation to have arisen spontaneously in some acute diseases.” The same language is held by Van Swieten, who expressly declares “that it has been excited in human bodies without any received poison from a mad animal.”

In the further discussion of the subject, we shall confine our remarks to the disease as it exists in the human species, and it may be collected from what we have said, that its only probable cause is the virus of a rabid animal, and most generally, and perhaps exclusively that of the dog. Besides the actual insertion of the contagion by a bite, the disease is asserted to have been imparted by the slaver taken upon the lips or tongue, by biting off a thread which had been used in mending a rent in a garment from the bite of a rabid dog,* also by kissing a rabid animal,† and likewise by a cut with an instrument used years before, in killing a mad dog.‡ Cases are moreover related of its having been conveyed by the saliva taken into the stomach,§ and by eating the milk and flesh of animals which have died of the disease||—and by dissection of such animals—and it is further said to have been received from a scratch made by the claw of a mad cat,¶ and lastly by the breath of a rabid animal.** More than one of these averments are, however, obviously erroneous. It is well ascertained that the milk and flesh of infected animals have been eaten with impunity, and that dissections of them have been often performed, and in no instance, so far as we have heard, with any sort of injury. The universal escape of the attendants on the subjects of the disease who are exposed to every source of exhalation, argues strongly, independently of other reasons, against the possibility of communication by the breath or any other vehicle of contagion, and not less against the danger of infection from depositions of the saliva on the skin, if there be no abraded or ulcerated surface exposed. The unfounded tales of this description have led to much mischief, by exciting a timid and cautious solicitude, preventing not only the exercise of those attentions towards the unfortunate sufferers, which humanity and a sense of duty inculcate, and the successful treatment demands, but they have operated to retard the progress of the investigation of the disease.

No circumstance connected with this subject, is of greater curiosity or more mysterious complexion, and difficult explanation, than the length of time which the virus will remain in the system in a state of inactivity. It is not, however, without analogy. Miasmata, we are aware, will do the same, and as instances of closer similitude, the variolous and vaccine contagion may be adduced, each of which

* Cælius Aurelianus, Hildanus, Hamilton.

† Palmarius, Shenkius.

‡ Shenkius.

§ Palmarius.

|| Fernelius.

¶ Hildanus.

** C. Aurelianus, Aretæus, Boerhaave.

is occasionally dormant for weeks or months. Yet these latter examples are of very rare and anomalous occurrence, which is not the case with the hydrophobic virus. It observes no certain or definite period in the development of its action, for the disease has appeared in all the intermediate periods, from the third day to an indeterminate length of time. Cœlius Aurelianus says a year or more—GALEN informs us that he saw a case which broke out after a year—Meade one after eleven months, and another has lately been reported of nine months.* The most common period of the attack, according to AURELIAN, MEADE, and HAMILTON, is from twenty to forty days, and the latter writer, who has most elaborately investigated the subject, affixes the tenth day as the earliest, and nineteen months as the remotest period of its development. Cases, however, are recorded where the attack was protracted to the extent of twenty, and even forty years, but they are derived from apocryphal authority, and impose no credibility. Many causes have been assigned for these diversities, without however, any satisfactory explanation, such as the degree of activity in the virus, the contiguity of the part bitten to the salivary glands, or its sensibility, the ferocity of the animal inflicting the bite, or the stage of the disease when the virus is imparted, the irritability of habit, &c.

The first indication of the action of the virus is by pain or uneasiness in the wounded part, which had previously healed so as to leave scarcely a vestige of the injury, and never more than a cicatrice. In some instances the uneasiness complained of, is that of a burning or itching sensation, and occasionally red pimples have appeared immediately over the marks of the dog's teeth. These slight preliminary affections are soon followed by lancinating pains along the limb in which the virus was received, extending gradually throughout the body, and are felt particularly in the region of the stomach, with heaviness of the head, and dejection of spirits. Concomitant on this state, or directly succeeding to it, are a sense of coldness, pallid face, frequent yawnings and stretchings, acute pains in the bones and muscles resembling rheumatism, particularly in the back and extremities, considerable tremors, lassitude and disinclination to muscular exertion, with an expression denoting anxiety, timidity, and even terror. In the further progress of the case, the alimentary canal becomes more seriously affected, as is manifested by thirst, perversion of taste, flatulence, sour eructations, acute pain about the scrobiculus cordis, a burning in the stomach, nausea, and vomiting, in which a glutinous brown matter or porracious bile is discharged.†

* London Medical and Physical Journal, July, 1828.

† Boerhaave.

The pulse at this time is usually disturbed, not so much by the febrile movement, as that it is quick and irregularly disordered, and the skin is mostly cold, or temperature is unequally diffused. Great tightness of the præcordia is felt, and the respiration embarrassed by constriction, or seemingly from heavy pulmonary congestion. It is now, though sometimes earlier, a sense of stricture about the throat is experienced, causing pain and difficulty of deglutition, especially of fluids,* and from the recollection of the suffering from preceding attempts to swallow, such an aversion is induced that the sight of fluids, or any transparent object as a mirror, which renews the association, creates the most afflicting suffering, and often spasms and convulsions.

In a more advanced stage of the disease, the preceding symptoms are increased, and some new affections added. Generally the patient will be found sitting up, as his distresses are aggravated by a recumbent posture. Exhausted, however, after a while, he sinks into his bed and endeavours to sleep. But this, which is rarely obtained, is of short duration, and disturbed by frightful dreams. The sensibility of the system henceforward becomes so exquisite that it cannot bear the slightest impression. Light is painful to the eyes, and on the whole sentient surface, air of a medium temperature produces sensations of chilliness, and a draught of it, or any sudden noise may excite convulsions. It is impossible to contemplate the situation of a patient at this stage without emotions of horror and regret. To all we have said is added an aspect ghastly and full of despair. The muscles of the face are distorted, the eyes fierce, "dismally wild, red, and inflamed," with the pupil much dilated, gaping of the mouth, lolling of the tongue, which is dry or rough, with a collection of froth about the mouth, attended by great heat and thirst, which cannot be allayed, for the very sight of water excites violent spasms, and often madness, and in this frensied moment endeavours are seemingly made to spit the frothy slaver upon the attendants. Constantly now do spasms and convulsions recur, and from stricture of the glottis a peculiar noise is heard, which a prepossessed or excited imagination might compare to the barking of a dog. The spasms which pervade the whole system attacking the muscles of the lower jaw, inducing a sort of chattering of the teeth, has been represented as a disposition to bite. But any tendency of the kind does not exist. Towards the close of the disease, strangury frequently occurs, and some writers take notice of the "vene-

* There is rarely much difficulty in swallowing solids.

rii frequens—erectio, cum seminis involuntarii jactu,” and now the scene closes with a weak and thready pulse, cold extremities, clammy sweats, deep sighing, hiccup, and finally a fatal convulsion.

It is in this way, according to our own experience, which is pretty ample, that it runs its course. But it sometimes varies its character, and presents some deviations from its ordinary tenor and appearance. Thus it has happened throughout its career, that no trace of vascular irritation or excitement could be discerned, while in other instances, fever has decidedly prevailed with considerable topical affection of the stomach, the lungs, or brain. There is also no little difference in the maniacal condition, sometimes occurring in the very beginning, and continuing with temporary intermissions through every stage of the case, and it has been remarked that the faculties and senses were unimpaired to the last moment of existence.* Nor is the aversion to fluids so generally held as pathonomic of the disease, an universal concomitant. Many cases on the contrary, are reported in which it did not exist, and by some of the highest authorities of our science.† It is indeed stated by MORGAGNI, that patients in some instances are so far from having any dread of water, that they solicit to have it brought to them.

By reviewing the preceding account of hydrophobia, we can rarely be embarrassed in distinguishing it from its kindred affections. It most closely resembles certain forms of hysteria, and tetanus particularly. There are certain symptoms, however, of the former, such as the alternation of crying and laughing, so peculiar to it, that independently of other evidence, we may arrive at a just discrimination with considerable facility. As to tetanus, the difficulty is greater, and we are required to institute a very careful analysis and comparison of symptoms. The details of the diagnosis we shall postpone till we come to the consideration of that disease, and shall now only remark, that the most distinctive characteristic is the difference in the nature of the spasm in the two cases, being in the one milder, followed by relaxation, and in the other tremendously violent, and in the interval still retaining an unrelenting rigidity. Even more perplexing are some of the cases of spontaneous hydrophobia, so intimate is the analogy, and we can only attain to any degree of certainty, by recurring to the mode of production, to ascertain, whether it be from the bite of a rabid animal, or otherwise.

The prognosis in this disease is at all times most unfavourable. It

* Cesalpinus, Salius, Codronchius, Aromatorius.

† Hildanus, Meade, Lieutaud, Arnold, &c.

has hitherto indeed proved the least tractable of morbid affections. No cure well authenticated of genuine hydrophobia, has ever been effected so far as our inquiries have extended, and in which opinion we are sustained by the very best medical authority. It is true, that cures have at different times been reported, and some of which are very confidently affirmed by respectable practitioners. But on strict scrutiny it will be perceived that they were not of the real or traumatic form of the disease, and generally consisted of a modification of tetanus or hysteria, or some other nervous or spasmodic affection. True hydrophobia therefore remains to defy our skill, the most conspicuous of the opprobria medicorum, and he who avers the contrary, deceives himself.

Dissection has been practised to a considerable extent in hydrophobia, and the phenomena disclosed amply detailed. These of course vary in different cases.

In the brain the effect of a copious determination of blood is evinced, the vessels of the substance being distended, and large extravasations deposited in different parts of its structure, while the meninges are more or less inflamed, and serous effusions are met with in the ventricles.*

* "Dissections generally discover the vessels of the brain distended, the sinus longitudinalis full of fluid blood, not coagulated, as usual in most other diseases of the head; the brain and spinal marrow drier than ordinary; the pericardium without liquor, the lungs loaded, the arteries full of blood very fluid, and hardly concreasible in the open air."—*Meade*, p. 82.

"The dura mater contained within its sinuses concretions; beneath this membrane were some bubbles of air. All the vessels of the brain were full of blood so that the choroid plexuses were black; there was no extravasation of serum. The substances of the cerebrum and cerebellum were rather dry than moist."—*Morgagni*, p. 167.

"In the meninges the vessels were extremely distended with blood, and the internal surface of the brain was every where distinguished with bloody points, and a kind of bloody filaments. In the lateral ventricles was a small quantity of serum, and that a little reddish."—*Ib.* p. 160.

"The vessels of the meninges, both arterial and venous, were immoderately full of blood, and that, as it was in every other part, very black. In the ventricles of the brain, there was a yellowish water, to about the quantity of three ounces."—*Ib.* p. 172.

"There was a distention of the pia mater on the surface of both hemispheres with a limpid fluid. The quantity of fluid in the lateral ventricles at the basis of the brain, and round the spinal marrow, appeared to be somewhat unusual."—*Ferriar's Med. Hist.* p. 205.

The following was the result of several dissections, communicated by Mr. J. Fabbroni to Sir Joseph Banks.

The lungs have been noticed phlogosed in their coverings, and adhering to the neighbouring parts. But the most uniform appearance is heavy engorgement, giving to them a dark colour with vesicles on the surface, as if raised by cantharides. Marks of inflammation are also seen in the diaphragm. The heart has seldom been found affected, except perhaps in a single instance by an adhesion to the pericardium. More commonly the ventricles are filled with coagula of blood. The large arteries emanating from it are usually distended with fluid blood, so much dissolved as scarcely to be concrescible when exposed to the atmosphere, and the veins nearly empty.*

"The viscera were uniformly healthy, except in one subject, in which the lungs were found adhering to the pleura; but in all of them, the brain was observed to be more loaded with blood than usual."—*Lond. Med. Journal, Vol. X.*

* "The lungs appeared wonderfully distended and inflamed with the black blood with which they were swollen throughout."—*Hernand. rerum mex. Med. Thesaur. p. 494.*

"The lungs on all sides cohering with the pleura, were filled with a mass of concreted blood, which rendered them impermeable, or stuffed up, and when cut into, they appeared as a clot of blood."—*Bonet. Sepul. Anat. tom. I. p. 342.*

"The lungs on their whole posterior part, were not only black, but even swollen from the blood, as it seemed stagnated within them."—*Morgagni.*

"Pulmo pleuræ adherens concretu sanguinis molem referebat."—*Lieutaud, Hist. Anat. Med. tom. I. p. 445.*

"Pulmones coacervato omni fere cruore incredibiliter plenos."—*Boerhaave, Aph. 1146, vol. I.*

"Inter cadaveris, exenterationem, occurrit vesi cula fellis bile nigerrima repleta, pulmones conspiciuntur nigri et graveolentes."—*Lieutaud, p. 515.*

"In the thorax, the lungs, to use the words of Boerhaave, were coacervato omni fere cruore incredibiliter plenos, 'that is, incredibly filled with almost all the crassamentum of the blood, collected and condensed together,' and in their back part, might even be said to be affected with gangrene."—*Morgagni, 171.*

"There were some adhesions of the pleura covering the right lobe of the lungs, to that lining the ribs, on the same side: the left lobe was so completely filled with blood as to have acquired considerable weight and solidity."—*Ferriar's 2d case.*

"The left lobe of the lungs was black, with the vesicles full of black blood: the surface in some places, which the blackness had not covered, appeared blistered, or if raised by cantharides."—*Philos. Trans. quoted by Ferriar.*

"In the lungs there was evidently an accumulation of blood, and more in the right side than in the left. The pleura in its natural state, but the vessels on the surface of the diaphragm, seem rather more turgid than usual."—*Babington's case.*

The stomach exhibits much evidence of diseased action, and among other appearances there is discovered in it a quantity of dark offensive fluid, its mucous coat phlogosed even to mortification, extending down to the duodenum. The large intestines are often loaded with fecal matter. Neither the liver nor urinary bladder entirely escapes inflammation.*

As to the parts in and about the throat, they are described as suffering materially. The pharynx, the œsophagus, the larynx, and part of the tracheal tube, have been all observed either diffusively inflamed, or dotted with livid spots. But the most striking peculiarity which has been remarked in such examinations, is an uniform want of moisture throughout the solids, amounting to absolute dryness, in many instances.†

The preceding history is derived chiefly from the older writers, who having cultivated morbid anatomy with less care, their reports are in

“In the lungs were found considerable marks of inflammation.”—*Cullen's Clinical Lectures*, p. 173.

“Lungs much inflamed, and towards the back part, of a livid appearance.”—*Rhode's case, from Hamilton*, 365.

* The following is the result of Morgagni's dissections, relating to the stomach: “The stomach once turged with air, and its vessels distended with blood: its internal coat once *corrupted*, and the others distinguished with red spots; five times, indeed, a moisture was observed in it; but once much, three times little, once yellowish, once green, once of a yellow colour, degenerating into green, once extremely yellow, once cineritious, twice viscid, once not viscid.”—*P.* 176.

In Ferriar's first case, the stomach exhibited marks of inflammation, “and was half full of a dark fluid.”—*Med. Hist.* 206.

“On opening the stomach, the villous coat was found to be generally inflamed in irregular points, and there was an appearance of abrasion, similar to that remarked in Johnson, my former hydrophobic patient.”—*Ferriar's 2d case*.

“Non tantu œsophagus, sed et ventriculus, et intestina inflammata rubescabant in alio cadavere.”—*Hernand. rer. Mex. Thesaur.*

In a dissection of a case which I attended, the stomach exhibited many marks of inflammation. “It also contained the dark fluid which so frequently occurs in yellow fever.” This case is detailed in the Medical Repository.

† An inflammation of the organs of deglutition is noticed by Van Swieten as a very common occurrence.—*Comment. Vol. III. p.* 561.

Meade relates, “that the fauces were greatly inflamed.”

Fauvry also mentions the “gula being inflamed, and the linea aspera in some measure also.” “The fauces were found much inflamed.”—*Philos. Trans. Vol. V. p.* 369.

Inflammatory appearances have also been remarked in the œsophagus, pharynx, and larynx, by Morgagni, Zwingerius, and other writers.

some degree to be distrusted. By more recent and accurate inquiries we are taught that the disease mostly expends itself on the spinal marrow, which is usually inflamed in its coverings as well as substance, with sometimes copious effusions. They also report the mucous lining of the stomach, especially about the pylorus, as phlogosed, and the pharynx and larynx pretty much in a similar condition. Dissections have however been lately made, in which scarcely a morbid appearance could be detected. Not many years ago we attended the examination of the body of a woman who died of a most violent attack of the disease on the third day, and though the inspection was most thoroughly conducted, no trace whatever could be discovered of inflammation or its consequences in any one part. The contents of all the cavities, including that of the spine, were perfectly sound, and the only change perceivable was an universal aridity of the solids—the muscles especially, on dissection, being as dry, florid, and polished, as they become when exposed to the air for some time.

We are now prepared, by these prelusive investigations, to consider the pathology of hydrophobia, and it need scarcely be remarked that the disease continues to be involved in extreme obscurity. Cullen says with respect to it, “I find I can say nothing satisfactory to myself, or that I can expect to prove so to others.”

Though we have undoubtedly improved our knowledge since the time of that illustrious teacher, we apprehend, that in the spirit of candour, we shall be compelled to essentially the same confession, or should we, from our superior intelligence, claim some advances, we dare not say, that we can approach to certainty and truth on the subject.

In the speculations on the nature of hydrophobia, it has long been regarded almost exclusively as being either nervous or inflammatory, and on this question much controversy has prevailed. Discussions of such abstract propositions, are productive usually of little utility, and which is strikingly exemplified in the present instance. Not a ray of theoretic light has been shed by these disquisitions, to direct the treatment of the disease, and we are as much embarrassed on this point as before they were commenced. But in the very recent discoveries, relative to the nervous system, we have opened to us a view, which may hereafter, perhaps, by further cultivation enable us to construct a better pathology, and pursue a more successful practice, in this hitherto indomitable disease.

It is now ascertained, that muscular action is influenced chiefly by the nerves which are derived from the spinal marrow, and to that source must we look for an explanation of the leading and principal

phenomena of the disease. The virus acting primarily on these nerves, produces lassitude and painful uneasiness, soon followed by tremors, and ultimately by spasms and convulsions. But such is the intimate communication between the whole of the nervous system, that the morbid irritation becomes extended to other portions of it, presenting a case of greater complication, and more diversified symptoms. The dejection of spirits, the fearful anxieties, in the early, and the delirium and even frantic rage, of the more advanced stages of the case, manifest cerebral disorder, and the affection of the stomach, its sensibility, nausea, and vomiting, with the heavy congestions in other organs, particularly the lungs, equally attest that the ganglionic nerves are implicated. As to the difficulty of deglutition, and aversion to fluids, these are compound phenomena, produced by a mixed nervous agency. The muscles subservient to deglutition, are supplied from the cervical nerves, and on which their muscular action is dependent. But swallowing is a voluntary act, and in order that the muscles performing it should be obedient to the will, they also are furnished with numerous ramifications from the fifth pair, which are cerebral nerves. Now the influence of the former being interrupted by an affection of the spinal marrow, the muscles of deglutition, from the want of such influence, can no longer harmoniously co-operate in the execution of that function. But on the contrary, when the stimulus of volition is applied to these through the latter nerves, their own organic irritability is only excited, and instead of acting in unison, they are thrown into the most irregular and convulsive movements, entirely frustrative of the attempt to swallow. The horror of fluids is a mere mental emotion, which was formerly explained. As for the extraordinary aridity of the solids, amounting to absolute dryness, in some instances, it has hitherto been ascribed to the deprivation of drink. But having witnessed the same condition in a case, where it was constantly administered, this explanation fails, and it is more probably owing to a suspension of secretory action, from an interruption of nervous agency, by which the fluids are eliminated.

As described, such appears to be the order of nervous irritations, constituting this disease, and much further in the development of its pathology, we cannot proceed. It may be vaguely affirmed, that the virus being of a specific character, its effects must be the same, which is only a barren truism. But similar language is held in relation to other virus's, and the essence of hydrophobia is wrapt in not deeper mystery than those of syphilis, variola, vaccina, and some

other analogous cases. *Dies doceat*, and we must look to the revelations of the future, for the solution of the problem.

It has been made a question, in what manner does the virus operate? By many it is still supposed, that it is absorbed into the circulation, and thus produces its effects, than which no hypothesis is less sustained by fact or analogy. All morbid affections as is strikingly illustrated in such as originate in inoculation, commence at a point, and are extended through the medium of sympathy or association, till more or less of the system is brought into participation, inducing what is called a general disease. It would seem, that hydrophobia in all its stages, is characterised by a predominance of nervous irritation, and such a condition cannot exist without inviting an afflux of blood to parts most highly irritated, and hence in its progress, congestions and inflammation take place. But this explanation of these phenomena, is perhaps only applicable to the early stage of the case, and at all events another cause, the want of adequate nervous energy, is much concerned in their production. Experiments demonstrate that wherever this happens by the destruction of the nerve, or by a ligature, or any other mode intercepting the supply, the organ labouring under the disability, uniformly falls into collapse, and fills with dark, undecarbonised blood. No stronger example of this can be given than the asphyxia, with engorged lungs, induced by cutting or tying the eighth pair of nerves. It is this condition of organs, with a correspondent disturbance of the circulation, and other functions, which has led some to view the disease as essentially of a phlogistic and febrile nature.

We come now to the treatment of the disease, and which may be divided into prophylactic, or the means of prevention, and therapeutic, or plan of cure, after the virus has taken effect, and the case is developed. To meet the first indication, the ancient practitioners preferred an application of the actual cautery to the wound, converting it afterwards into a running sore, by irritating dressings—then instituting a course of the veratrum or white hellebore, with the use of the cold bath. The latter was also confided in by VAN HELMONT, BOERHAAVE, VAN SWIETEN, and by most of their cotemporaries and successors, for a considerable period, without, however, any satisfactory evidence of its utility.

As to the treatment of the disease itself, reliance was chiefly placed in the hellebore, as appears from the writings of ACTIUS, PAULUS, AEGINETA, ACTUARIUS, &c. Besides this, however, there were various other remedies, many of them of quite an empirical character, all of which, with the hellebore, have long since been ex-

ploded. To the *Cineres Cancræ Usti*, the most popular nostrum of that day, succeeded the specific of Mayerne, consisting chiefly of pewter filings—then DAMPIER's powder, which had the sanction of Meade, though composed of ingredients entirely inert—next the Tonquin remedy, composed of cinnabar and musk, followed by the Ormskirk medicine, the basis of which were chalk and elecampane root, with a variety of other nostrums—including the notorious Chinese snakestone of our own country, etc. equally devoid of just pretensions to efficacy.

Not the least promising means of obviating this terrible disease, would seem to be a mercurial course, and hence it attracted much attention, and has been amply tried, with results, however, so various and contradictory, that the confidence it once inspired, has gradually worn away, and at present we believe it is universally distrusted, and perhaps abandoned. It is not difficult to account for mercury, and even remedies of the most preposterous kind, having acquired, and sustained a temporary credit as preventives of hydrophobia, when we consider that only a portion of those that are bitten by a rabid animal, are perhaps, susceptible at the time to the disease—that the bite is generally through clothing, which intercepts the virus—that when it is actually inserted into a wound, it may be inoperative, and that there is often great reason to doubt the madness of the dog. It is remarked by Mr. HUNTER, that he knew “where twenty-one people were bitten by one dog, nothing was done for them, and only one became affected.” By Hamilton we are also told, that in one instance four men and twelve dogs were bitten by the same animal, the former entirely escaping, and all the latter went mad. Now, had these persons been under medical care, the remedy used, would have had the merit of the prevention, and under such a delusion its fame become widely spread, and falsely trusting to it, the mischief co-extensive. It is in this way, by loose and incautious inferences, that medical testimony is rendered uncertain, and even so proverbially fallacious, that it should never be fully received till it is rigorously scrutinized, and especially as a foundation of practice.

Discarding then, all other prophylactic means as totally inert in which estimate of their inefficacy, we have reason to suppose, we are well sustained, the following course should be pursued, as affording the best, and perhaps only security.

The bitten part is first to be wiped, so as completely to remove all the slaver of the animal, and then the whole wound is to be excised, taking care, in prosecuting the dissection, that the scalpel is cleaned after each cut, so as to prevent any further inoculation from the vi-

rus which might adhere to it. Having thus carefully performed the operation, the wound should be thoroughly washed, by pouring water on it from the spout of a tea-pot or kettle, which being done, it is usually recommended to convert it into a suppurating sore by the application of caustic, and subsequent irritating dressings, with a view to the establishment of a drain. It has just been remarked, that in the primitive practice in this case, the actual cautery was employed, and which is pointedly recommended by VAN HELMONT, STAHL, MORGAGNI, and very recently by MANNOIR MAROCHETTI and ORFILA, though we doubt on any just grounds of preference. The object is the same, the establishment of an issue or drain, and as to the means, it is not material which of the two is selected. But we concur with many by whom the practice is condemned as painful and nugatory, and would never resort to it. Be the utility of it as it may, it is very questionable whether the principle which dictates it be correct. It seems to us far more likely, that the occasional success of such treatment is to be assigned to the change which is effected in the nervous sensibility of the part, preventing the extension of the original irritation, and thereby stifling the disease at the initial point, exactly as in the case of tetanus. As well from a priori reasonings, as the evidence of recent experiments, we should attach much greater importance to pressure on the part of such force as might deaden its sensibility, or, in other words, to occasion a partial paralysis of it. Exhausted cups over the part, so much commended of late in poisoned wounds, and which, we think, have been shown to operate in this mode, and not by the interruption of absorption by the removal of atmospherical pressure, we should deem less appropriate to this particular case, the effect being only temporary, and the latent period of the hydrophobic virus indefinitely protracted.

To the universal employment of the practice suggested, there may be objections, or the occurrence of circumstances to interfere with its adoption. "Thus much time may be lost before the arrival of a surgeon, the patient may resist all solicitation to submit to the knife. The wound may have been inflicted on the face, or near some large blood-vessel, or there may be so little probability of the madness as to render it unjustifiable to subject the individual to present pain, and future deformity." In certain of these contingencies, we must be content with copious ablutions, so as completely to wash out the bite. But however remote may be the date of the bite, let not the excision, and other precautionary measures, already enumerated, be omitted, when considered as warrantable by the situation of the wound, or presumptive danger.

As regards other parts of the prophylaxis, not much need be said. It may be proper to regulate the diet, and to avoid all undue excitements. To dissipate alarm, and inspire confidence in his security, are considerations of the last importance to the patient. The operation of fear in exciting many diseases is well known, and examples are so numerous of a condition of the nervous system very closely resembling hydrophobia, and sometimes proving fatal, having been induced principally by depression of spirits from idle apprehensions of its actual occurrence, that some respectable writers have gone to the extent of maintaining, that the disease in the human subject, is always thus brought on, and is merely an hallucination of the mind. Denying the truth of an unqualified hypothesis of this sort, it must still be conceded, that uniformly great anxiety prevails, which often tends to lamentable consequences, and should be studiously guarded against by all possible means.

Concerning the cure of the disease when once formed, we are embarrassed what to say. As previously intimated, there is no one remedy or system of practice hitherto proposed, on which we can rely, or which candidly viewed, seems entitled to preference. To detail the progress of opinion, or recount the modes of cure which have prevailed, would be to repeat the history of error, and would prove a melancholy record of the uncertainty of medical statements, and we shall decline so unprofitable a task.

Two plans of treatment have, in comparatively modern times, been pursued, drawn from those opposite views of the nature of the disease, which were formerly noticed, as now chiefly entertained. Considered by one set of pathologists as consisting in spasm from debility, every plausible means of stimulation were resorted to, and most actively employed. It was then that opium, musk, camphor alone or variously combined, and wine and other alcoholic liquors were principally relied on, aided by bark, valerian, and the whole tribe of tonics and antispasmodics. Nor has mercury been neglected. The fairest trials on the contrary have been made of it, and with no better success than the preceding articles, all of which were impotent to the relief of a single case. It ought not perhaps to be omitted that Moseley has reported two instances of the disease cured by mercurial inunction in which salivation took place, in the one in twenty-four, and in the other in forty-eight hours. Not knowing the particulars of these cases, we cannot pretend to determine how far they were genuine, or otherwise have claims to attention. But they were little regarded at the time of publication, have never been insisted upon as evidence of the efficacy of the remedy, and probably are without au-

thority. Moseley at that period had from an unhappy combination of circumstances, fallen from his former high estate, and became low indeed in general estimation. The victim of adverse fortune, his moral character was impaired, and his intellect so weakened, that he proclaimed under the sanction of his name, the extraordinary hypothesis, that from the practice of vaccination, the human species would ultimately degenerate into the cow, in support of which he adduced many facts of the commencement of the process of transformation. Can the statements of such a man on any subject be credited?

Encouraged by the authority of Boerhaave, who had taught the inflammatory character of the disease, a different practice came to be pursued. Discarding stimulants—venesection and other means of depletion were directed most freely, and in some instances to an extraordinary extent, even *ad deliquium animi*, with however no greater advantage. It is true that cases have been reported of its success, a collection of which may be found in the works of the late Professor RUSH. But these are not considered as instances of genuine traumatic hydrophobia, several of them undoubtedly not, being hysteria or other nervous affections, and the whole of them labouring under the defect of a perfect authentication. The practice has, moreover, been tried and found wanting, in every recent application of it, as well here as elsewhere. Thirteen cases of the disease we have seen either under our own care, or that of our medical friends, three of which were treated by the late Professor Rush, where venesection was carried as far as possible, and the conclusion from all this experience is, that not the slightest benefit accrued, even the mitigation of a solitary affection from that or any other remedy employed.

An analysis of the cases reported to have been cured by venesection might prove interesting, had we time to devote to the purpose. But it has already been well done by Dr. MEASE, to whose paper, in the Medical Recorder, Vol. II. we must refer such of our readers as are curious on the subject. To a certain extent our estimate of the remedy is confirmed by Dr. Rush himself, whose opinion has more force, as at one period he anticipated a complete triumph over the disease from its liberal use. “The theory of the disease,” says he, “would lead us to expect a remedy for it in blood-letting. But this, though now and then used with success, is not the cure, owing, as we now see, to the morbid seat of the disease being so far removed from the circulation as not to be affected by the loss of blood in the most liberal quantity. As well might we expect the inflammation and pain of a paronychia, or what is called a felon on the fingers, to be removed by the same remedy.”

Belonging, however, exclusively to neither of these plans, various remedies at different times have been tried which here might be enumerated, were they deserving of notice. Perhaps, however, a word may be said of the super-acetate of lead, from the use of which a cure is said to have been made in Baltimore within the last few years. How far this is true, we are not sufficiently acquainted with the facts of the case to determine. But the practice completely failed in two recent cases in Charleston and London.* Dismal as this account is, of the incurability of hydrophobia, we cannot relieve its dark shades, by one bright tint, consistently with candour and truth.

Encountering hereafter the disease, we would change the treatment very considerably. Being called in the early stage of it, we should proceed exactly as if the infection were just received, excising the part, and applying cups or heavy pressure on it so as to destroy its nervous energy. By doing so, we might check the further progress of the attack, in the same way, as the removal of the irritation of a wound, puts an end, in some instances, to the series of convulsive motions which constitute tetanus. It ought, however, to be practised as early as possible, for the consecutive trains of morbid action being once established, they then become independent of the original irritation, and cannot be so readily, if at all subverted. Do we not sometimes arrest altogether lues venerea by the destruction of chancre, though the latter may have existed long enough to have excited bubo or some other affection consequent on the primary irritation? and are we not equally apprised of the fact that the same thing happens with respect to vaccination? Let not this suggestion at least be disregarded as unworthy of attention in the present poverty of remedial resources. Nor ought a failure or two, to discourage from further trials, since the same has happened with the operation when instantly performed, though in the general result successful.

As the spinal marrow appears to be early and seriously affected, it were well to endeavour to reinstate its healthy functions, and for this purpose no measure would probably be so effectual as leeches or cups to be succeeded by a strip of epispastic plaster or issues, or the actual cautery along the vertebral column, and it is not unlikely that some advantage might be derived from counter irritation over the epigastrium. To prevent or check convulsive spasms, compression by tourniquets to an upper and lower extremity on opposite sides is worthy of trial, and more especially as it has answered so well in epilepsy, and in the inveterate attacks of cholera morbus. Death

* London Medical and Physical Journal, July, 1828.

sometimes seemingly happens very suddenly from spasm of the glottis, and where it is menaced from this cause tracheotomy may be performed, as suggested originally by Professor Physick.

In the use of general remedies, we should be governed by circumstances, resorting to venesection and evacuants of the alimentary canal, or to stimulants and antispasmodics, or sedatives as indicated, alone, or united with calomel. Great embarrassment has heretofore been complained of in the administration of medicines, from the inability of deglutition, or the intractable spirit of the patient. But this may be readily overcome by the introduction of the œsophagus catheter, through which medicines, drink and food, are very conveniently poured into the stomach, as we witnessed in one case of the disease. Nothing could exceed the apparent comfort and refreshment which the patient experienced from broth, and particularly cold water, with which she was supplied in this manner, throughout her illness. In the last few years we have heard much of the success of an experiment by Majendie, in which a large quantity of water was injected into the veins. But we do not confide in it, as highly improbable, and particularly since it failed in other hands.*

We have now completed the consideration of this subject, which, perhaps, has been treated more extensively than it claimed, from the uncertainty of our knowledge regarding it. But it is one of intense interest, in whatever view it may be contemplated—and we deemed it proper to lay open the whole field, with the hope that it may receive some cultivation and improvement. No where is the disease, probably of more frequent occurrence than in the United States, and from the ample opportunities afforded, we will not despair of seeing it further elucidated by the well-directed investigations of some of our practitioners. To determine correctly the pathology, and to indicate with any certainty, the cure of hydrophobia, are to wipe away a reproach to our art, and to earn a reward as much more glorious than the oaken wreath awarded by the Roman Senate to a soldier who saved an individual in battle, as the preservation of the lives of thousands is to that of one, or the triumphs of science compared with a solitary achievement of military intrepidity or prowess.

N. C.

* Vide a report of a case of hydrophobia, by M. Gaspard, in which an injection of water into the veins, so far from affording relief, most manifestly did injury by depressing strength, and exciting a chill and fever.—*Lancet*, Vol. II. p. 363.

BIBLIOGRAPHICAL NOTICES.

1. *Versuch einer Medicinisch-Chirurgischen Diagnostik, in Tabellen oder Erkenntniss und Unterscheidung der innern und aeußern Krankheiten, mittels Nebeneinanderstellung der ähnlichen Formen.* Von D. KARL GUSTAV. SCHMALZ, Ärzte und Physikus zu Königsbrück. [Dresden & Leipzig; folio, pp. 264. Fourth edition, enlarged and improved.]

An attempt at Medical and Surgical Diagnosis, in Tables; or Recognition and Discrimination of Internal and External Diseases, by comparison of their resembling forms. By CHARLES GUSTAVUS SCHMALZ, M. D., &c.

A great difficulty connected with the noble profession of medicine is, that of correct discrimination between diseased actions, since very many, notwithstanding a striking resemblance of symptoms, require treatment of directly opposite character. It has therefore always been a desideratum, to ascertain the distinctive peculiarities, or *pathognomonic* signs, produced by various affections, and by contrasting such peculiarities with others having a general similarity of aspect, yet still unlike in order of occurrence, violence, duration, &c. to enable the practitioner to decide upon the true character of the case.

But a very different degree of importance was attached to diagnosis during the empire of that baseless fabric of verbiage, dignified by the sonorous title of *nosology*; a system which teaches directly and by implication that *diseases* are actual entities, or beings producing their like by a seed, and as incapable of change of character, as any other beings in nature. Under the guidance of such systems, it was of the last consequence to determine the *name* of the *disease*, because the name implied the *nature*, not the *seat* of the affection, and the treatment was to be directed against a peccant entity, rather than to restore the healthy action of organs which had suffered no change but in their sensibilities, producing disturbance and irregularity in the performance of their functions.

The recorded experience of ancient medicine, supported by all the experimental researches of later days, goes incontestibly to prove that diseases are merely disarrays of function produced by disorder or disturbance of healthy action, and capable of being endlessly varied and modified according to the multifarious influences of age, climate, temperament, nutrition, texture, &c. and that all the modifications of action occurring in the animal economy, designated as diseases, result from changes produced in the condition of the nervous and vascular systems; in the first, evinced by degrees of irritation, and in the last, as consequences of the foregoing, of engorgement and inflammation. Hence, the physician who aims at an accurate diagnosis, endeavours to ascertain the causes which determine changes in the nervous system, and the peculiar signs of disarray superinduced in different *textures* and *organs* thereby, without being solicitous to aggregate symptoms which are designated by particular titles. In this mode of studying his subject, his pathology will be correct and advantageous, in proportion to the extensiveness and accuracy of his acquaintance with physiology, and his diagnostics will lead him to a clear conception of the textures

or organs affected, according to his skill in detecting the aberration of functions from their normal conditions. It is truly a subject upon which the profession may be congratulated, that the physiological study of pathology is steadily and surely removing the rubbish of prejudices entailed upon it by great names and dogmatic systems, and that physicians at last, are condescending to study nature, instead of continuing to pin their faith upon the sleeve of Sauvages or Cullen.

The work of Dr. Schmalz is very creditable to its author; notwithstanding its having been drawn up too much under the influence of exploded doctrines, it may be advantageously consulted by the practitioner who can profit by these tables without reference to theoretic views. The author arranges in contrast, all the morbid actions most liable to be confounded, in a tabular form, and states briefly the symptoms believed to be characteristic of each. Such discriminations, however, sometimes appear rather verbal than real, more especially when attempts are made to distinguish between different degrees of morbid action in the same texture. The introductory observations of Dr. Schmalz are indicative of good judgment and correct general views of the objects of our profession. A part of his introduction is occupied with an excellent and perspicuous account of auscultation and percussion as means of distinguishing diseases of the chest, and bears a very decided testimony in favour of their usefulness, now no longer doubted, except by those who are too indolent to derive advantage from their ears.

We notice this work, however, more with a view of inviting attention to the subject at large, than in reference to the absolute merit of Dr. Schmalz's treatise. A treatise on diagnostics, founded on a proper study and application of the principles of general anatomy, and physiology to pathology, would be a work of great value to students and practitioners. Such a work would certainly require an ample preparation, both of reading and experience, the most deliberate and scrupulous investigation, and great intellectual resources. Yet, notwithstanding the magnitude of the task, we feel persuaded that there are among our readers, some who are competent, and might win a lasting renown by its execution, which would entitle the author to the gratitude and respect of the profession, as well as of the community in general.

J. D. G.

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2. *Se la Febbre Gialla sia o no un Contagio, Quistione Agitata dai Medici Europei ed Americani.* Memoria del Cav. Dott. G. PALLONI. Livorno, pp. 160. 8vo.

As medicine is one of those arts which exercises a most powerful influence on the welfare and happiness of the human race, it becomes a question of the highest importance, whether its principles are grounded on indisputable data, or are mere theories, liable to change with every fluctuation of opinion.

It must be admitted that, notwithstanding the rapid advance of the science, there are yet many points, and those of extreme importance, on which there is an inexplicable diversity of sentiment, even among the most learned of the profession, and on none more so than that of contagion, particularly as connected with yellow fever. A late writer has applied the appropriate phrase of "romance of history" to that portion of it, where causes of events, and motives of agents are explained and commented on, by writers living ages afterwards,

with an assumption of knowledge, scarcely, if ever possessed by the very participators in the scenes. We may apply the same phrase to the healing art with equal truth, for we have unfortunately too much of the romance of medicine, deluged as we are with false facts and unsubstantial theories, which are the more dangerous from many of them having emanated from those, who, by their learning and talents, have invested them with so specious a garb, that it is almost impossible to distinguish the true from the false, the useful from the worthless, it may be truly said of medicine, "*que le vrai n'est pas toujours vraisemblable.*"

The doctrine of contagion from its extreme importance, has received more attention, and caused more acrimonious disputes, than any other portion of medical science, and notwithstanding the number of volumes on the subject already before the public, we are yearly presented with others on this apparently inexhaustible topic. A manifest change however, may be observed in the relative number of the adherents of the doctrine of contagion and their opponents. During the last century, few writers were to be found who were hardy enough to oppose the popular opinion of the propagation and dissemination of yellow fever by contagion, whereas they are now most numerous, and include many of the most learned and distinguished of the profession.

The work, whose title stands at the head of this notice, is the production of one of the most celebrated physicians of Italy, and was drawn up as an answer to certain queries addressed by the board of health of Marseilles to that of Leghorn, on the subject of quarantine regulations.

Dr. Palloni is a firm believer in the doctrine of contagion, we shall not, however, attempt in this place to answer any of his observations, but content ourselves with presenting the questions as proposed, with a condensed view of his answers.

The questions are as follows:—1. Are vessels arriving with clean bills of health but from suspected ports, subjected to quarantine? 2. Are their cargoes purified, and in what manner? 3. Are the interiors of vessels fumigated and washed? 4. What is the length of quarantine for men, and what for cargo? 5. What precautions are taken with regard to persons labouring under the yellow fever? 6. What is the procedure with vessels, &c. having suspected or clean bills of health?

Such are the interrogatories submitted to the board of health of Leghorn, and attempted to be answered by Dr. Palloni, who is one of its members, and he does it rather by a disquisition on yellow fever, than by simple and plain replies.

He observes that it is impossible to enter on the consideration of these questions, without taking a rapid view of the doctrine of contagion, and of the different opinions entertained with regard to it, and justly complains that instead of the examination being conducted in a calm and philosophical manner, it is a mere scene of contention and anger disgraceful to the profession. His first proposition is, "that the yellow fever is a disease foreign to Europe, but indigenous in some parts of the West Indies, from whence it always comes to us by being introduced by persons or goods, and consequently that it is contagious." This he thinks he has established satisfactorily on the following grounds. 1. That it was never known in the Mediterranean ports until after the communi-

cation with the West Indies, and particularly with the Antilles, had been established, and that it has always arisen from the arrival of persons or merchandise from an infected port. 2. That those European ports which have enforced a rigorous quarantine have escaped, and vice versa. 3. That whatever may be the local causes of infection, and whatever the degree of sickness induced therefrom, the yellow fever has never appeared except in those ports in which vessels from the West Indies have arrived.

Hence, says he, we are warranted in saying, "that the yellow fever, which yearly desolates most countries situated between, or near the tropics, but especially the Antilles, New Orleans, &c. is a peculiar contagious disease, which may be carried to other countries by means of persons or goods, and there induce an identical epidemic. That the yellow fever is always contagious, but not always equally communicable or destructive."

That all substances are capable of retaining this contagion unaltered and for a length of time, if they are in a confined situation and not exposed to the action of the air; of these substances the most *susceptible* of contagion are feathers, wool, cotton, &c. That a humid and warm atmosphere increases the diffusion of the disease, and cold moderates and destroys it.

Dr. Palloni further states, that numerous facts and experiments have convinced him that this contagion may be dissipated and destroyed by oxygen or fumigations with sulphur or chlorine.

The above are the most important views of our author on yellow fever, and we have given them without comment, leaving our readers to draw their own conclusions as to their correctness. To attempt to answer them, even briefly, would require more time and space than we can afford to the subject. We have been induced to notice the work from the celebrity of its author, and from its presenting in a condensed form the strongest arguments that have been urged in favour of the doctrine of contagion.

With the sentiments entertained by Dr. Palloni, he of course, in his answers to the questions from the board of health of Marseilles, strongly insists on the absolute necessity for the strictest quarantine, and gives the following sketch of the plan adopted at Leghorn. All vessels arriving at that port from the Antilles, or any port of North America to the south of Cape Fear, during the summer season, or which may come from any other port in which yellow fever may exist, are subjected to quarantine as foul, and all passengers, &c. are detained thirty days from the discharge of the cargo, (if composed of *susceptible* materials,) which is itself detained thirty-five days, and cleansed and purified in the lazaretto. This quarantine is lengthened if the crew, &c. have been sickly, or that any person has died on board. The vessel is cleansed and disinfected in every part, the clothing of the crew, &c. washed and purified, the ballast and the hold of the vessel thoroughly washed; the vessel is also anchored apart from all others.

We perceive, from the January number of the *Journal General de Medecine*, &c. that the Academy of Medicine of Paris, are not satisfied with exacting quarantine on vessels from suspected ports, but wish to extend its operation to those from England, because that country does not carry her sanitary laws into full effect. The learned *redacteur*, Dr. Gendrin, concludes a note with the following forcible and just observations on quarantine laws in general.

“Sanitary laws are necessary; precautions must be taken against the importation of diseases from abroad, even if they should not be contagious. This necessity is the law and limit of all health laws. Many of those at present in operation, in all civilized countries, should be modified by the present state of knowledge; it is to ameliorate them that our efforts should tend; they are rendered more efficacious in making them more perfect, whilst, at the same time, they will be less onerous, but the most important changes to be made, are strict regulations to be observed during the passage of vessels, contagion and infection should not be permitted to be generated on board vessels, to be afterwards destroyed in lazarettos.”

R. E. G.

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3. *Mémoire Physiologique sur le Cerveau*. Par M. MAGENDIE. Lu dans la séance Publique de l'Académie Royale des Sciences, le 16 Juin, 1828. [Brochure, 4to. pp. 17.]

The indispensable necessity of constant submission to the canons of sound logic and rigid induction, is forcibly demonstrated by the lamentable instances of hallucination manifested by eminent philosophers, when they forsake the secure path of experimental investigation, and plunge into the bewildering mazes of conjecture. Such, however, is the constitution of the human understanding, that as soon as an inquirer after truth ceases to be the faithful “minister and interpreter of nature,” he begins to wander from his object, and quickly substitutes some “idol” of his imagination, before which he falls down in an ecstasy of egotism, and worships with a fervour proportioned to its absurdity. From this madness, there is small hope that the individual can ever be recovered; his pride and self-love are kept too highly excited and flattered by his efforts to force all nature to submit to his speculations, or by his eagerness to proselyte those whose approbation may impart a temporary support. But, however hopeless may be the attempt to restore those thus grievously afflicted, it is an obvious duty to warn the unsuspecting of the true nature of their doctrines, and to place in the strongest light the folly of such aberrations from that philosophy which is alone capable of guiding to certain and beneficial conclusions.

The name of Magendie is familiar to students of physiology, and is associated with ideas of indefatigable industry and extensive experience. To a considerable degree of rashness, and a rather positive manner of deciding from experiments performed under the influence of preconceptions, he united a remarkable patience of research and deliberate examination of the opinions of others. His elements of physiology is a work worthy of the era in which it was produced. Subsequent to that publication, Mr. Magendie advanced in his experimental career, with a rapidity and success which gradually detached him from the temperate course of induction, and finally led to the extravagant views which we now find him indulging in. His first decided indication of vain idolatry of his own fancy, was the experiments he made in London on the fifth pair of nerves; there, in opposition to analogy, experience, and demonstration, he inferred from entirely inadequate data, that the fifth pair was the exclusive organ of sensation, and that the olfactory, optic, &c. were entirely misnamed and misunderstood. Since that period we have regarded him as lost to the sober realities of science, and have even received his annunciation

of facts with a scepticism only to be removed by demonstration. The memoir we are now about to analyse, will prove that this course was not only correct but indispensable.

Before we enter upon this unpleasant duty, we deem it necessary to state, that nothing but the high standing the author has heretofore maintained, and the authoritative institution whence it emanates, could have induced us to bestow so much attention upon this memoir; which is, in all respects, the most absurd production we have been obliged to read in the discharge of our professional duty.

Such writings, in general, are treated by his journal, with the neglectful silence their insignificance merits. It is only in cases where the authority of a *name* might mislead the unwary, that we condescend to notice folly, which would otherwise awaken no deeper feeling than pity, no stronger emotion than contempt.

It is known to most of our readers that Mr. Magendie has been for some time engaged in investigating the nature and quantity of a fluid found within the spinal column and brain, which he was the first to declare a part of the healthy system, and not as previously supposed, a mere consequence of disease. Though the existence of this fluid has been generally admitted as a part of the healthy living system, there are circumstances relative to it, which should always be distinctly remembered; that the brain and spinal marrow are surrounded by serous membranes, whose office in other parts of the body we know to be the secretion of a halitus or vapour, very readily condensable to a fluid by change of temperature. The existence of this cerebro-spinal fluid is only demonstrable after death, or by opening the vertebral cavity of living animals; in the first instance, we know that not only the change of temperature, but the accumulation dependent upon endosmosis and exosmosis, have taken place.

In opening the vertebral cavity of a living animal, not only is the external air admitted, but the nervous system is more or less disturbed, and the usual actions of the parts impaired. We are at least certain, that the serous membranes in other parts of the body, do not, during life and health, pour out a fluid, yet after death, or in states of disease, a large quantity of fluid is found within them; all of these circumstances should at least be recollected when we admit the existence of such a fluid, as a healthy constituent of the body. The following is Mr. Magendie's statement of the quantity of this fluid, which, at best, can but be regarded as approximative, since it is scarcely possible from individuals, unequivocally dead of disease, to deduce the average quantity possessed by persons enjoying "all their corporeal and intellectual faculties."

"In an adult man of ordinary size, and enjoying all his moral and intellectual faculties, the quantity is about three ounces; females, all other circumstances being equal, have a larger quantity, which we shall presently see, is not one of the advantages they possess over us. In old men this fluid is still more considerable; it may even amount to six or seven ounces, but then the mental and bodily faculties are much impaired. The place occupied by this fluid is worthy of remark; it forms around the brain and spinal marrow a layer, varying in thickness at different points; in the neck it is four or five lines; in the loins more than an inch; around the brain, generally one or two lines, and in certain cases and places nearly an inch."

Thus far, our author proceeds rationally enough, but to the latter part of the preceding statement, he asks whether this be not a powerful objection to Gall's system, as the layer of fluid must render it impossible for the protuberances of the brain to be marked on the surface of the skull, as the surface of the brain cannot exactly correspond to the inner surface of the cranium. But to this objection it may be answered, that the fact of the correspondence of the brain and skull has been a thousand times demonstrated, and can be proved in the same way at any moment. It remains, however, *to be proved*, that this fluid does cover the brain. We now enter upon the extravagances of this memoir, which will justify all we have said in commencing this notice.

"The study of the fluid covering the brain, has led me to a singular and unexpected fact relative to the volume of the brain. We represent the volume of the brain as invariable, because we think it exactly fills the capacity of the cranium, and we do not see our heads emaciate or fatten like other parts of the body; but *nothing is less real*. I have assured myself that the brain follows the other organs in relation to changes of volume. In all diseases of a certain duration, in which the body emaciates much, the brain undergoes an analogous diminution, and the convalescent who supports himself with difficulty, and refers his debility to the almost complete disappearance of the muscles of his limbs, may, with equal propriety, attribute his mental feebleness to the diminution of the volume of his brain."*

Now, in the name of reason, we inquire, whether such nonsense would not be sufficient to cover any but a *great name* with ridicule?—Every anatomist living has dissected the brains of individuals who have died of pulmonary consumption, marasmus, inanition, and various other causes producing extreme emaciation of body; and found such brains filling the cranium in the usual manner, and in no way participating in the emaciation of the body. Every man of observation is acquainted with instances of persons reduced by disease to a state of extreme emaciation and debility, who have, nevertheless, exhibited force and activity of mind, equal to the highest intellectual operations. And yet we are told, in the face of all sorts of demonstration, that the brain waxes and wanes with the adipose and muscular systems, and this cerebro-spinal fluid, is destined to occupy its place as the brain diminishes! This, however, is only a foretaste of what our author can do.

"After having perceived the uses of the cerebro-spinal fluid, I wished to investigate what influence it had upon life, and consequently had to experiment upon animals in whom this fluid is in smaller proportion.

"My first experiment was made upon an old and fierce fox, taken in a trap. Every time I made a small puncture in his neck, he lost all his cerebro-spinal fluid: the effect which followed was exceedingly striking; the animal, so fero-

* If other proof were deficient, we might, with great advantage, refer to the productions of some of the most celebrated poets and philosophers, written when their authors laboured under an extreme degree of emaciation and corporeal debility. The extreme emaciation of *Voltaire* was remarkable during the time when his best works were prepared, and various similar instances might be cited; one other, however, will suffice, which is that of the celebrated *Dugald Stewart*, whose last work, finished but a few hours before his death, which was preceded by the extreme of corporeal wasting and feebleness, perhaps exhibits more of vigour, elegance, perspicuity, and intellectuality, than any of the compositions he prepared during his greatest degree of physical health. Were we to judge Mr. Magendie by his present memoir, as exhibiting the condition of his brain, it would be impossible to avoid believing it to be, according to his own doctrine, very much emaciated!

cious an instant before, became immediately calm, no longer attempted to bite, nor made other movements. Seeing this, I had him untied, and left at liberty in my garden, but he lay down on the spot, and did not stir till the following morning. He then attempted to move, and made several steps with considerable firmness; at the end of thirty-six hours he again attempted to bite and escape. I then made a new puncture in his neck, and was convinced that his cerebro-spinal fluid was completely restored."

With what serious circumstantiality is this related, and how readily does the author arrive at the desired conclusion! Let us examine the conditions of this experiment. Mr. Magendie takes an old fox, ties him fast, thrusts an awl through his neck into the spinal cavity, and the animal lies down and becomes calm! Was not the awl thrust *a little* way into the spinal marrow? did not the animal *fall* down? was he not immediately *paralysed* in the extremities? By no means, says the author, nothing but the cerebro-spinal fluid escaped! Although untied, the poor fox remains on the same spot all night, and it was not until thirty-six hours had elapsed that he began to make a few steps; then he again became snappish—because his cerebro-spinal fluid was restored! How satisfactory the experiment! how satisfied the experimenter!

Notwithstanding the exhaustion of our patience, we find still more food for mirth and melancholy, as we advance.

"There are several cavities hollowed out in the centre of the brain, where probably some of the most secret mysteries of the nervous and intellectual systems take place. Can one believe that these cavities; so important for the phenomena which occur there, have been, and still are named, *ventricles* or little *bellies*? Let us always add to the credit of modern anatomists, that the epithet came to us from the ancients, who were so fond of it, they placed it everywhere. What we call *chest*, they called *belly*. The stomach was nothing but a *ventricle* or little belly. The heart has still two ventricles. The brain, doubtless on account of its being the most noble, has no less than *four ventricles*: is it not time that this trivial denomination was expunged from anatomical language?"

Mr. Magendie acknowledges that there are *cavities* in the brain, and *assumes* their great importance from the occurrence of phenomena, which he *supposes* to take place therein. Then, in a spirit of misrepresentation, as simple as it is ridiculous, he finds fault with the names given by the ancients. Now, these names signified, and still signify nothing but *cavities*, and the terms *γαστήρ*, *κοιλία*, and their derivatives were applied to hollow parts, or viscera generally, and for no other reason than their being or containing cavities. Why should not anatomists continue to designate the four cavities of the brain by words expressive of their condition without reference to functions which are still unknown? What should we gain by ceasing to call two cavities of the heart, ventricles? and what advantage have we over the ancients, in calling that *chest* which they called *venter medius*? We wish that we had something more creditable to remember of modern anatomists than merely not having given these names; and hope, that as long as we remain ignorant of the uses of the cavities of the brain, we shall be contented to call them ventricles. But what will be the reader's surprise, to find our author, immediately after eulogizing the ancients, for their nomenclature of other parts of the brain!

"The nomenclature of the parts contained within the brain, offers a very re-

markable circumstance, and to which I wish first to call attention; many of these parts have names indicating hydraulic uses: here it is an *aqueduct*, there a *funnel*; now a *valve*, and even a *bridge*: most of these denominations descend from remote times; they are still used, but they are regarded as mere vestiges of an ancient system thrown into ruins by time and the progress of science."

Here we have Mr. Magendie's grand idol; he has broached the cerebro-spinal fluid, and collected enough of it to float himself to any point! This fluid is a vital fluid; its presence is necessary in the brain; and Mr. Magendie has not only discovered a way for it to pass in and out of the ventricles, but he finds out that the ancients were "righte cunningge wightes" for their *hydraulic* nomenclature, which is so well suited to his hydraulic theory!

"In fact," says he, "what is called the great valve of the cerebellum, fulfils, to a certain point, the office of *valve*. The *aqueduct* has really the function its name indicates, since it conveys the cerebro-spinal fluid from the fourth ventricle to the third. The infundibulum or *funnel* conveys it as far as to the pituitary gland, and finally the *bridge* is an arch placed transversely to the current of the liquid, not *above*, but *below* it; to give a just idea, of which we may refer to the gigantic tunnel now constructing under the Thames"!!

But we grow sick of such stuff, and must hasten to a conclusion; the remainder of the memoir being filled with theories about as rational as the preceding, supported by observations equally profound. He regards the pineal gland as a *plug* destined to close and open the *aqueduct* of the brain; and in order to enable it to do this, he discovers that it is moved by the pressure of two large veins, which, by their swelling and diminution, govern the *plug*. The quantity of cerebro-spinal fluid, being in inverse proportion to the intellectual energy, he thinks that those who value themselves on finely formed foreheads, had better be sure that this fluid be not too predominant, and they be found out as fools in despite of their fine phrenological indications!

Notwithstanding all this nonsense, we have certainly met with much of it before, and especially in the writings of the anatomists, whose finely imagined theories of animal and vital spirits led them to the adoption of the *hydraulic* nomenclature, which Mr. Magendie so much admires; proving for the thousandth time the correctness of the poet's observation:—

"Out of the old fieldes as men saith,
Cometh al this new corne fro yere to yere,
And out of old bookes, in good faith
Cometh al this new science that men lere."—*Chaucer*, Assembly of Fowls, st. IV.

In concluding, we cannot but lament that a physiologist of our author's standing, should thus have relinquished his proper rank, and lent the influence of his example to a mode of theorising, at once rash, prejudicial to science, and injurious to the reputation of those who pursue it. To bestow due praise upon excellence, is one of our most delightful offices; but on occasions like the present, it becomes an imperative duty to censure without reserve: if we cannot affect offenders against sound philosophy, we may at least awaken the serious attention of those who are liable to be misled by vicious examples.

"Disceat enim citius, meminitque libentius illud,
Quod quis deridet, quam quod probat et veneratur."—*Hor.*

J. D. G.

4. *Abregé pratique des Maladies de la Peau, d'après les Auteurs les plus estimés et surtout d'après les Documens puisés dans la Clinique de M. LE DR. BIET, Médecin de l'Hopital Saint Louis.* Par MM. A CAZENAVE et H. E. SCHEDEL, Docteurs en Médecine, anciens internes de l'Hopital Saint Louis, &c. &c. Paris, 1828, pp. 527, 8vo.

It must be evident to the most casual observer, that medical science has assumed a more dignified and philosophical character within the present century. Instead of being a mere record of extraordinary cases, or of unsound and visionary theories, it is now grounded on the only principles that can give it stability and render it a blessing to mankind. This has arisen from the general spirit for physiological and pathological research which has been so happily excited among the profession; and for this we are in a great measure indebted to the French school of medicine, and particularly to the illustrious Bichat.

This improvement is strongly exemplified as regards cutaneous affections. Medical men had long been in want of a practical treatise on the diseases of the skin, which whilst it gave the speculations and practical precepts of the older writers, also treated of these disorders on physiological principles. Within the last two years several important works have appeared on this subject, both in England and France, among which may be mentioned those of Rayer and Plumbe, but the latest, and we believe the best, is that whose title we have given at the head of this notice.

All these authors have partially accomplished the object with which their works were undertaken, that of disentangling an important portion of medical science, from the mass of absurdities and false theories under which it had so long laboured; we say partially, for although these treatises are by far the most practical and useful we have met with, yet from the neglect, which the diseases of the skin have heretofore experienced, an almost inextricable confusion has reigned among them. This may be accounted for by the total want of classification and exact description among the earlier writers, and the defective and vicious divisions adopted by later authors.

To give some idea of the confusion which has arisen from the application of the same distinctive name to diseases that are wholly dissimilar, we need only instance leprosy. This term is applied by some authors to a tubercular eruption, (elephantiasis of the Greeks;) by others to a disease of the subcutaneous cellular tissue in which the skin does not participate until the disorder has existed for some time, (elephantiasis of the Arabs.) Whilst others again by this word, mean psoriasis, eczema, lichen, &c.

Before entering on the consideration of the work of MM. CAZENAVE and SCHEDEL, we will take a rapid view of the labours of the authors who have preceded them.

The first who attempted to introduce some order and precision in the study and classification of cutaneous disorders, was Mercuriali in 1623. He divided these affections into two great classes as attacking the head or body; in this plan he was followed by Turner in 1736; these works contain some exact descriptions and valuable practical remarks, but are in general inaccurate and defective.

The next work of importance was that of Lorry in 1777, in which he has diligently collected all that had been given on the subject by preceding authors, and endeavoured to refer them to definite heads, in this he was unsuccessful, having rather added to, than diminished the confusion already existing, his idea was that cutaneous diseases generally arose from morbid humours latent in the system, which thus attempted to free itself; hence he divided them into depuratory disorders, having a general or a local situation, those affections which he allowed to be primarily seated in the skin he also classed in the same manner.

Retz, whose work appeared in 1790, adopted another mode of arrangement, in which he was followed by Derien in 1804, and I. Franck in 1821; this was to divide the diseases into acute and chronic. This is perhaps more defective than those of their predecessors; as we must either admit with the latter authors that an eruption of an acute form is wholly different from another presenting the same appearances, but of a chronic nature, or class the same disease in different divisions according to its progress.

In 1783 appeared the celebrated treatise of Plenck, which was followed in 1798 by that of Willan, who has in a great measure adopted the classification of the former, particularly in his nine first classes, although they differ much in the subdivisions.

Plenck wholly rejected all division of diseases according to the parts in which they occurred, and arranged them by their external characters, but he committed a strange error in admitting as genuine diseases, those which were merely sequelæ of inflammations.

Willan, and afterwards his pupil and friend Bateman, assuming Plenck's general views, established a system which, although not free from errors and defects, presents a rare example of clearness, precision, and exactitude. Their works are too well known to render it necessary for us to notice them particularly.

The great and magnificent treatise of Alibert made its appearance about 1806. The author has adopted with some modifications the plan of arrangement proposed by Mercuriali and Turner, that of making a kind of topographical division of the cutaneous affections, these are of course subdivided into species and varieties. The great defect of this classification is, that diseases of the same character are widely separated from their happening to have a different termination or appearance.

The treatise of Rayer, in 1826, is much on the same plan of arrangement as those of Willan and Bateman, but is far superior in the views it presents in physiology and pathology, this author has taken a more comprehensive ground, and treats not only of diseases of the skin, properly speaking, but also of alterations of the appendages, or productions of this tissue, as well as of foreign bodies observed on its surface, or within its substance, and of diseases, which, though at first unconnected with the skin, finally cause alterations in it.

Rayer's work was followed by that of Plumbe, who assumes a very different ground, dividing all diseases of the skin into six classes. 1st. "Those diseases which obtain their distinguishing characteristics from local peculiarities of the skin." 2d. Diseases marked by chronic inflammatory action of the vessels secreting the cuticle, producing morbid growth of the structure, and generally dependent on debility of system. 3d. Diseases exerting a probably salutary

influence on the system originally produced by, and usually symptomatic of deranged digestive organs, and characterised by active inflammation. 4th. Diseases of a mixed character, essentially dependent on inflammation, with which the constitution is not necessarily connected. 5th. Diseases dependent on debilitated or deranged states of the system and consequent diminished tone of the vessels of the cutis. 6th. Fungoid diseases of the cutis and cuticle. This mode of classifying diseases of the skin appears at first view to be a great improvement on those that preceded it, but on a closer examination it will be found that it cannot be carried into practice, but notwithstanding the defects of this part of Mr. Plumbe's book, it contains a mass of useful and practical information.

The work of MM. Cazenave and Schedel may be considered as emanating from Dr. Biett, physician to the hospital of St. Louis, as it is founded on the views and practice he has adopted.

The plan of classification is founded on that of Willan and Bateman, with some few modifications introduced by M. Biett, as follows:—

Order 1. Exanthemata, including erythema, erysipelas, roseola, rubeola, scarlatina, urticaria.

Order 2. Vesiculæ, including miliaria, varicella, eczema, herpes, psora.

Order 3. Bullæ, composed of pemphigus and rupia.

Order 4. Pustulæ, comprehending variola, vaccina, ecthyma, impetigo, acne, mentagra, porrigo.

Order 5. Papulæ, lichen, and prurigo.

Order 6. Squammæ, including lepra, psoriasis, pityriasis, ichthyosis.

Order 7. Tubercula, elephantiasis græcorum, molluscum, framæsia.

Order 8. Maculæ, subdivided into discolorations, as *bronze colour of skin*, lentigo, nævi, and decolorations, as albinism and vitiligo.

Diseases which cannot be included in any of the above orders.—1. Lupus—2. Pellagra—3. Syphiliticæ—4. Purpura—5. Elephantiasis of the Arabs—6. Diseases of the sebaceous follicles—7. Keloide.

After giving the general plan of classification, our authors designate each of their divisions by a short but lucid definition.

It will be seen by the above, that this work does not include the whole of the alterations of which the skin is susceptible, but is confined to those which are proper to this tissue, thus for instance, anthrax, phlegmon, &c. forming Rayer's fifth division, are omitted as being affections of the cellular tissue, although the skin is often implicated in advanced stages of the disease. It is what it purports to be, a practical abridgment on diseases of the skin.

The authors have endeavoured as far as possible to give the synonymes of the diseases, and particularly those of Alibert, wherever they corresponded with their divisions, or those of Willan; this is of essential service as affording a means of comparison.

The plan the authors have pursued in treating of each disease is well arranged, and the descriptions of the symptoms are accurate and clear.

We can safely recommend this work to the attention of practitioners as containing much practical information, not only on the treatment, but also on the causes of cutaneous affections, and as being in fact, the best treatise on diseases of the skin, that has as yet appeared.

R. E. G.

5. *Traité des Maladies des Enfants nouveaux-nés et à la Mamelle.* Paris, 1828, pp. 654, 8vo. avec 10 planches, coloriées, 4to. Par C. BILLARD.

In this work, the author has passed in review almost all the possible affections, that can well attack children during the period he has specified. For this task he appears to have been well qualified from the position he held in "l'Hospice des Enfants-trouvés de Paris," and from the apparent zeal with which he has entered upon his task. The frequent opportunities presented to him for examinations after death, rendered him particularly familiar with the pathology of most of the fatal complaints to which early infancy is liable, and which must necessarily contribute largely towards a better understanding of the diseases and affections of this period of life.

His object in the present work, as he declares, is, to point out the character of symptoms belonging to the diseases of children, and to consider their relations with organic alterations; to detail the various appearances of the human organs in a state of health and that of disease; and to deduce the mode of treatment, from the anatomical lesions they may have suffered from this cause.

He passes rapidly through the consideration of the development of the organs, and does not stop to notice all their vicious conformations, but confines himself to such only as give rise to symptoms, and derange the various functions of new-born children during life.

He omits many of the affections of childhood, such as fever, worms, and the lymphatic derangements; because he thinks none of these derangements are very common during the period of suckling. He has nevertheless bestowed attention upon no less than one hundred and fifty different diseases and affections, which he considers as belonging to the period comprised between birth and weaning.

From the multiplicity of the complaints he has considered, we cannot give even an enumeration of them; for this we must refer to the work itself; and we do this the more cordially, as we believe its perusal will afford an ample reward for the trouble of doing so. To the student of medical jurisprudence, it will in many instances be highly valuable, as he has detailed many novel and interesting facts upon several doubtful points, and especially upon the appearances of the child and umbilical cord after death.

W. P. D.

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6. *Traité Général d'anatomie Comparée par J. F. MECKEL, traduit de l'Allemand et augmenté de notes.* Par MM. RIESTER et ALPH. SANSON, Docteur en Chirurgien, de la Faculté de Paris. Précédé d'une lettre de l'auteur. Vols. I. and II. 8vo. Paris, 1828.

The name of MECKEL, has for some generations been consecrated to anatomy, and enthusiasm for this science, appears to have descended with undiminished force to the author of the work before us. Since the publication of Cuvier's immortal Lessons of Comparative Anatomy, the researches of philosophic inquirers, throughout the world, have augmented the mass of facts to a degree almost incredible, and rendered it necessary that some one should attempt, what Meckel has performed. His design is to present a complete view of the science, as it now exists, arranging all the facts, and deducing all the principles they support, thus extending to the utmost, the boundaries of general

physiological science. The exceeding rapidity with which discoveries and improvements follow each other in comparative anatomy, cannot be better shown than by the fact, that in the short period which elapsed between the publication of Meckel's treatise, and its translation into the French language, enough was done to render large additions necessary by the translators. They very justly remark, that notwithstanding the completeness of Meckel's treatise, it is only to be regarded as a work of transition; because the science is still far from the state of perfection, to which it must eventually attain.

"To depict the charms of comparative anatomy," says Meckel, "appears to me absolutely useless; they present themselves to every intellect, whose cultivation has not been entirely neglected. As to the question of its utility, that is, of its influence upon other sciences, the following sketch may suffice. Physiology incontestibly could not exist without comparative anatomy, which furnishes most of the notions by which it attempts to explain general or particular vital phenomena; I will go farther and say, that comparative anatomy is evidently but a part of physiology, in the most extended sense of that word. Comparative anatomy is not less interesting to zoology, of which it is actually a part; if it be recollected that the object of zoology is the description of animals, and that there is very little essential difference between the disposition of the external surface, and the internal organs it conceals. Then, since physiology and zoology should be familiar to an enlightened physician, (a proposition which it would be useless to prove to the true physician, and superfluous to the slave of routine,) comparative anatomy becomes an integrant, and necessary part of medical education."

The intention of a bibliographic notice, being merely that of announcing publications, and giving some general ideas of their character, it is sufficient to state that Meckel's treatise on comparative anatomy is a faithful record of the existing condition of this science, presenting a view of every modification of structure, from the simplest to the most complicated, and displaying every thing which can throw light upon the obscurest parts of physiology. Every intelligent physician can see at a glance how much such knowledge will aid him in the study of the human system, both in its physiological and pathological conditions, and will rejoice that so much has been done by our author, to render access to this invaluable department of science easy.

On a future occasion, in a more ample review of the condition of anatomical science, we shall revert to the peculiar doctrines deduced by Meckel from his observations on human and comparative anatomy. In the mean time we can conscientiously recommend his works at large, to the medical reader, who will find in them vast stores of knowledge beautifully arranged, and admirably explained.

J. D. G.

7. *Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London, Vol. XIV.* London, 1828, pp. 463, with five plates.

The Medical and Chirurgical Society of London was founded in the year 1805. Its object is to elevate the character and dignity of the profession, and to promote the advancement of medical and surgical science, and in furtherance of this, the business of the society consists in the reading of communications; and the

interchange of practical knowledge in the way of easy conversation, avoiding debate and disputation.

To render the society as extensively useful as possible, a collection is made of the most interesting of the memoirs that are presented to it, and in 1809, a volume was published which constituted the first volume of the society's transactions. Since that period, thirteen volumes have appeared, (at irregular intervals,) and which constitute a very valuable and interesting series of facts and observations.

The fourteenth volume, which is just from the press, contains ten papers. The first occupies nearly half the volume, and is entitled "Observations on the nature and treatment of Erysipelas, illustrated by cases," by William Lawrence, Esq. F. R. S. &c. surgeon to St. Bartholomew's Hospital. This is the most interesting, erudite, and practically valuable memoir on erysipelas that we have met with, and we shall therefore present our readers with a very full notice of it. Notwithstanding the frequency of erysipelas, and the numerous opportunities therefore afforded of ascertaining its nature and management, much difference of opinion prevails, especially in Great Britain, on these points. Some regard it as an affection essentially inflammatory, and adopt the antiphlogistic plan of treatment, including general and local bleeding, whilst others conceiving that the part, the constitution, or both, are in a state of debility, endeavour to remove this by the free use of stimulants and tonics, more especially by bark, ammonia, and wine. Mr. Lawrence belongs to the former, and the object of his paper is to submit some of the facts upon which his opinion is founded; and also to offer some remarks, illustrated by cases, on the treatment of phlegmonous erysipelas by incisions, a remedy he estimates very highly.

By erysipelas, Mr. Lawrence understands "inflammation of the skin either alone or in conjunction with that of the subjacent, adipose, or cellular tissue. "Like other inflammations it varies in degree. When it affects the surface of the skin, which is red, not sensibly swelled, soft, and without vesication, it is called *erythema*. *Simple erysipelas* is a more violent cutaneous inflammation, attended with effusion into the cellular substance, and generally with vesication; *phlegmonous erysipelas* is the highest degree of the affection, involving the cellular and adipous membrane as well as the skin, and causing suppuration and mortification of the former."

Mr. L. gives a very particular and accurate account of the appearances, symptoms, and effects of both degrees of erysipelas, (simple and phlegmonous,) and a consideration of which has led him irresistibly to the conclusion that the disease is inflammatory. "In its four leading characters," says he, "of redness, swelling, heat, and pain, and in its effects of effusion, suppuration, and sloughing, it agrees with what is called common or phlegmonous inflammation; while the general disturbance, preceding and accompanying the local affection, is often exactly alike in the two cases. Erysipelas then is merely a particular modification of cutaneous or cutaneous and cellular inflammation. If we were to class these according to their natural affinities, we should place erysipelas between the exanthemata and phlegmon. It is less diffused than the former, not so circumscribed as the latter. The exanthemata are confined to the skin; erysipelas, affects both skin and cellular structure, while phlegmon has its original seat in the latter, the skin being secondarily involved.

Erysipelas and phlegmon, differ not merely in the original seat or degree of the disturbance, but also in kind. Phlegmon is generally a more violent inflammation than erysipelas, but sloughing of the cellular substance is more frequent in the latter than in the former. The most striking and important distinction between the two affections is that inflammation is confined to one spot in phlegmon, and is distinctly circumscribed in its seat, while it is diffused in erysipelas, and spreads without limit, owing to the substance called coagulable lymph being effused around the inflamed part in the former, and forming a boundary between it and the sound portion, while in the latter the effusion is serous, hence, when matter is formed, it is not confined to one spot, but becomes extensively diffused in the cellular tissue. Mr. L. does not agree with those who regard erysipelas as a distinct species of inflammation, and capable, in that character, of affecting various parts of the body, as the conjunctiva, mouth and fauces; the respiratory and alimentary mucous surfaces; the serous membranes in the head, chest, and abdomen; and the brain, abdominal and thoracic viscera.

In a natural nosology, Mr. L. thinks erysipelas would be classed among inflammations of the skin and cellular texture, and would follow erythema, to which he would refer slight, superficial, and partial inflammation, without vesication, generally without swelling or fever. Erysipelas, Mr. L. would define "spreading inflammation of a considerable portion of the skin, with diffuse redness and swelling, sometimes preceded, and generally accompanied by fever, and of this he makes three species.

"1. *ERYSIPELAS SIMPLEX*; superficial spreading inflammation of the skin, with bright scarlet or rosy redness, and soft tumefaction of the part, generally with vesications and fever.

"Synonyma.—*True or genuine erysipelas*.—*E. exanthematicum* or *verum*, (Rust, of erysipelas of the face.)

"Varieties.—*Acutum, chronicum; periodicum, habituale; perstans* or *fixum; ambulans* or *erraticum; saltans* or *volaticum*, (disappearing from its original seat, and re-appearing in a distant part;) *miliare, vesiculosum, bullosum, phlyctenodes; idiopathicum, traumaticum, sympatheticum, or symptomaticum, biliosum, gastricum*.

"2. *E. OEDEMATOSUS*; the swollen parts dark red, and pitting on pressure.

"3. *E. PHEGMONOSUM*; acute inflammation of the skin and cellular texture, with firm, general, and deep red swelling of the affected part, ending quickly in suppuration and sloughing.

"Synonyma.—*Diffuse cellular inflammation*, (Earle.) *Inflammation of the cellular texture*, (Arnott.) *Diffuse phlegmon*, (Baron Dupuytren.) *E. spurium* or *pseudo-erysipelas*, (Rust.) *Phlegmon erysipelatosus*."

The causes of erysipelas Mr. L. considers the same as those of other inflammations. "The habitual excitement of the vascular system, or the long-continued disturbance of the stomach, alimentary canal, and liver, consequent on intemperance and excess, lay the foundation of inflammation generally, and it depends on individual peculiarity, or on local causes, whether the skin or other parts shall be the seat of disease. In most cases of erysipelas the biliary and digestive system are more or less actively disordered, such disorder appearing sometimes to produce the cutaneous affection, sometimes to be excited sympathetically by it. Hence Desault established the denomination of *bilious* in contradistinction to *phlegmonous* erysipelas: on which division it may be observ-

ed that the symptoms called bilious are commonly found also in the phlegmonous cases.

“When it arises from internal causes, that is, when its appearance depends on the previous existence of disorder in another organ, it is called *sympathetic* or *symptomatic*, (*secondary, consensuale, deuteropathicum.*) But, in a large proportion of cases, it is directly excited by external causes immediately acting on the part, and it is then called *idiopathic*,* (*primary, protopathicum.*) Thus it is caused by external irritants of all kinds; by heat or cold, by blisters, issues, setons, caustics, or other acrid matters applied to the skin; by wounds, punctures, bruises, surgical operations, and all kinds of injury, (*traumatic E.*)

Neglect of previous preparation, inattention to diet, continued exercise of the affected part, and an imprudent degree of general exertion, are frequent causes of erysipelas after operations and wounds, and in the course of ulcers and other local affections, as are also injudicious modes of dressing, as irritating plasters, a heating load of dressings, and tight bandaging; in the latter instances, light applications and keeping the part cool are simple but effectual preventives. The most frequent source, however, of this affection, after accidents or operations, is indulgence in animal food, or fermented liquors.

Simple erysipelas is usually of the sympathetic kind, arising from internal causes, particularly from disorder of the *primæ viæ* or liver: hence the epithets *bilious* and *gastric*. As these causes are more or less permanent, they may produce repeated attacks of the disease, or render it of long duration: hence the expressions of *periodic*, *chronic*, and *habitual* erysipelas.

The occurrence of erysipelas of the face, Mr. L. thinks, but without sufficient evidence, may be traced, in some instances, to contagion.

“Phlegmonous erysipelas is more commonly idiopathic; it supervenes on the wound of venesection, on injuries of the superficial *barsæ*, as those of the *pattella* and *olecranon*, on incised and lacerated wounds, and compound fractures. An inflamed state of ulcers, especially in the lower extremities, is a common cause of it. This frequently comes on when large ulcers or extensive wounds are healing rapidly, in persons confined to bed and allowed a full diet of meat and beer. It has often been produced by wounds received in dissection.”

As erysipelas resembles other inflammations, in its causes, symptoms, and effects, so it must be treated on the same principles. Venesection, local bleeding, purging, and low diet, are the first measures, to which saline and diaphoretic medicines may afterwards be added. The earlier, according to Mr. L. these measures are employed the better: vigorous treatment in the beginning will often cut the attack short, and prevent the disease from spreading beyond its original seat. Mr. L. does not, however, recommend that measures equally active, and in particular, that bleeding, whether general or local, should be employed in all cases. “In young persons, in the robust, and those of full habit, in instances where the pulse is full and strong, or when there is head-ache or white tongue, in erysipelas of the head attended with symptoms denoting affection of the sensorium, and more especially in the very beginning of the affection, venesection will be proper, and it may be necessary to bleed largely, to repeat the evacuation, or to follow venesection by local abstraction of blood.

* These terms, respectively, are used by many writers in the opposite senses.

Under such circumstances, the other parts of the antiphlogistic plan must be also employed, that is, the alimentary canal should be cleared by an active purgative, which may be followed by salines and antimonials, with the occasional use of milder aperients; and low diet should be enjoined. Nothing can be more different from such a case than that of an elderly person with a small and feeble pulse, in the advanced stage of the disease. The interval between these extremes is filled by numerous gradations requiring corresponding modifications of treatment. The antiphlogistic plan itself embraces a wide range in point of degree, from blood-letting, local and general, with purging, vomiting, the free use of mercury and antimony, and low diet, to the exhibition of a mild aperient with some saline medicine. The treatment of erysipelas, like that of any other inflammation, must be modified according to the age, constitution, and previous health and habits of the patient, and the period of the complaint. In asserting generally that the antiphlogistic treatment is proper, I speak of the beginning of the disease, when the original and proper character of the affection is apparent; and I am decidedly of opinion that in some shape or degree, such treatment will always be beneficial in that stage. In many instances active antiphlogistic measures are of the greatest service in lessening the severity, both of the local and general symptoms. In others the administration of calomel with aperients, and of diaphoretics with low diet, will be sufficient. When the affection occurs in old and debilitated subjects, the powers of life are soon seriously impaired, and our efforts must be directed rather towards supporting them, than combating the local affection. I have often seen such patients labouring under erysipelas of the face in its advanced stage, with rapid and feeble pulse, dry and brown tongue, recovered, under circumstances apparently desperate, by the free use of bark and wine."

Local bleeding is sufficient in the milder cases of erysipelas, and is often necessary in the more severe ones, as an auxiliary measure. It may be accomplished either by cupping or leeches. The former, where practicable, is the most efficacious: a great objection to it arises from the painful state of the inflamed skin.

Mr. L. adduces a host of authorities in favour of the antiphlogistic treatment of erysipelas, we need not notice these; the experience of every one we believe in this country, is in favour of the practice.

After the inflammation has been arrested by the antiphlogistic measures, the patient is usually reduced in strength, and medical practitioners in general are then anxious to begin the strengthening plan; they seem, says our author, "to have the fear of debility constantly before their eyes, and lose no time in directing the employment of bark, and recommending animal food with beer or wine. In this way relapses are frequently produced; the inflammation and fever are renewed, further local mischief is caused, and recovery is retarded. When indeed the redness and swelling of the part are gone, when the pulse is quiet, and the tongue clean, that is, when the patient is well, there can be no great objection to the bark. The natural powers of the system quickly restore its strength, when the disease has been stopped by active treatment; in such cases strengthening medicine and regimen are not required. In others they must be used with the greatest caution. Sometimes they are at once obviously injurious; in others they do good at first, but soon cause a return of the complaint if per-

severed in. It is safest, therefore, to leave them off as soon as the state of the pulse, or of the other symptoms, which have indicated their employment is changed. The subcarbonate of ammonia is the best medicine in those cases, in which we doubt whether stimuli should be employed or not. It may be given without any risk of reproducing inflammation, while in most cases it is decidedly advantageous. Five, six, or eight grains may be administered in a draught, every three, four, or six hours."

Next to the volatile alkali comes the bark, and our author considers the sulphate of quinine as the most eligible preparation; wine, he says, is sometimes necessary, but it should be used very sparingly, and discontinued as soon as the necessity has ceased.

Our author thinks that general experience has determined that local applications possess but little efficacy; they relieve, however, he says, the patient's feelings, if they do not contribute greatly to stop the disease. "In the commencement, and before the inflammation is fully developed, cold applications are very agreeable by lessening the sharp burning heat of the skin. If their use is preceded and accompanied by a proper plan of treatment, there is no fear that the diminution of the external affection will cause inflammation of any internal part. Warm applications, more especially fomentations, are very soothing when the inflammation is developed. To derive the full benefit from them, they should be used steadily for hours together, and the part may be covered with a warm bread and water poultice in the intervals of fomenting.

Our author says nothing of the employment of the mercurial ointment, or of the solution of corrosive sublimate, as applications to the inflamed parts, and which have been used in this country with considerable advantage.

Mr. Lawrence quotes the high authority of Dupuytren in favour of the application of blisters to the inflamed surface; Rayer, however, disapproves of their use, and Roche and Sanson speak of the practice in a manner which is not calculated to recommend it. Our author's experience in the use of blisters seems very limited; he has used them, he says, "three or four times in simple erysipelas of the extremities, applying the blister on the boundary of the inflamed and sound parts, so as to cover an equal portion of each. The inflammation stopped in these instances; but as other means were employed at the same time, I could not determine how much of the benefit was due to the blister, which, however, did not cause suppuration nor any other unpleasant effect."

Mr. Hutchinson once applied a blister completely round the arm, some little distance above the line of demarcation, and it seemed to stop the progress of the disease, for the inflammation did not extend above the blister.

The utility of compression by means of bandages, as recommended by MM. Bretonneau and Velpeau, Mr. L. thinks doubtful, and he says it is by no means free from danger. In the cases in which he has seen it employed, it appeared to be productive of ill, if not fatal consequences.

In the treatment of phlegmonous erysipelas, our author recommends in the early stage, venesection, and the application of leeches in large numbers to the inflamed part, together with the antiphlogistic treatment generally, in order to prevent the full development of the affection. The bleeding of the leech-bites should be encouraged by warm fomentations, and cold lotions may be afterwards applied to the part: when, however, the inflammation is more advanced,

the latter must be exchanged for fomentations and poultices. After the bowels have been evacuated, calomel and antimony may be freely administered, accompanied with saline medicines. The local abstraction of blood is more serviceable than venesection; the latter, therefore, may be reserved for the instances in which the patient is young and plethoric, the pulse full and strong, or the head much affected.

If the disease is not cut short in its earliest stage by this kind of treatment, or if the case is not seen till the inflammation is fully established, perseverance in direct depletion, Mr. L. thinks is of little avail in checking its further progress. "The inflammation," he says, "will now pursue its course, both in the cellular membrane and skin, in spite of bleeding, whether general or local; suppuration and sloughing speedily supervene, and these destructive processes soon extend over a large portion of a limb.

"The most powerful means of arresting the complaint," adds our author, is by making incisions through the inflamed skin and the subjacent adipous and cellular textures, which are the seat of disease. These incisions are followed very quickly, and sometimes almost instantaneously, by relief and cessation of the pain and tension; and this alleviation of the local suffering is accompanied by a corresponding interruption of the inflammation, whether it be in the stage of effusion, or in the more advanced period of suppuration and sloughing. The redness of the skin is visibly diminished during the flow of blood from the incisions; in twenty-four hours it has usually disappeared, and the skin itself is found wrinkled from the diminution of the general inflammatory tension. The immediate relief, although very desirable to the patient, is, however, of less consequence than the decided influence of the practice in preventing the further progress of the disorder; and this important result has never failed to occur, within my experience, when the case has been a proper one for the practice, and the state of the patient has admitted of its being fairly tried.

"The treatment by incisions is suited to various stages of the complaint; but it is employed to greatest advantage at the beginning, since it prevents the further extension of inflammation, and the occurrence of suppuration and sloughing. The redness and swelling gradually subside; the surface of the cut granulates, and it heals rapidly. At a more advanced period, the incisions limit the extent of suppuration and gangrene; and at a still later time, they afford the readiest outlet for matter and sloughs, and facilitate the commencement and progress of granulation and cicatrization. When the matter has been fully discharged, and the sloughs, whether of the skin or cellular membrane, have separated, a healthy granulating surface is left, and no great difficulty is experienced in effecting cicatrization, unless the destruction of the skin should have been very extensive, when the cicatrix forms slowly, and is liable to give way again."

Mr. L. wishes it to be understood that he does not advise incisions in erysipelas generally, but that he confines their employment to cases of the phlegmonous kind. "We cannot, however," he says, "determine our treatment merely by reference to the name of the affection. Diseases appear quite distinct in nosologies, but we find them shaded off and so blended in nature, that it is frequently very difficult to mark out their boundaries.

When erysipelas attacks the face, it is not, according to Mr. L. attended with

that serious inflammation of the subcutaneous structures which requires incisions. The abundant cellular structure of the eyelids, however, not unfrequently becomes the seat of more severe inflammation, proceeding to suppuration and sloughing, and even causing partial mortification of the skin, and here incision may be advantageously resorted to.

"We may have in the scalp," says our author, "either simple erysipelas affecting the skin, and the texture exterior to the aponeurosis, or a form of the complaint, which may be called phlegmonous, in which the cellular tissue under the aponeurosis is inflamed. The former is to be treated by the ordinary antiphlogistic means. In the latter there is at first a soft but considerable swelling, with slight discolouration of the integuments, which pit on pressure. Suppuration and sloughing soon come on, with great disturbance of the head, and violent fever; and these destructive processes spread over the whole head. The skin inflames and ulcerates at various points, giving issue to matter and sloughs. By having recourse to incisions at an early period, we prevent the progress of this very serious affection, and the same proceeding is necessary at a more advanced stage, either to limit the suppurative and sloughing processes or to provide a discharge for matter and large masses of dead cellular membrane. The advantage, or rather the necessity of incisions in this affection, will be rendered obvious by a consideration of the local peculiarities, and does not require further explanation.

"The limbs, especially the lower, are the most frequent seat of the affection, which is at least very uncommon in the trunk. After the incisions have been made, the part may be covered with warm fomentation cloths until the bleeding has ceased, when a warm bread poultice may be applied. If discharge does not soon take place from the wound, it should be dressed, under the poultice, with lint thickly spread with the yellow basilicon ointment, or with some other stimulant. When suppuration has already occurred, the matter finds a free discharge at the incision: large portions of the cellular membrane often slough, and come away with copious discharges of matter, and it is sometimes necessary to extend the incision, in order to promote their separation. When this is at an end, and more particularly when the skin has been extensively detached by sloughing of the cellular membrane, pressure by bandage is very serviceable in promoting the healing process.

"The incisions, when made during the existence of active inflammation, are followed by profuse bleeding both from arteries and veins, which probably has an important share in arresting the inflammatory disturbance. The benefit, however, cannot be wholly ascribed to this cause, for it takes place even when the loss of blood is much less; and it is so immediate, that we cannot refer it to the suppurative process which afterwards occurs in the surface of the wound. The relief has been ascribed to the removal of that tension which always exists in a greater or less degree; we observe, indeed, that the edges of the wound usually gape asunder, and that the surrounding skin not only loses its deep red colour, but soon becomes wrinkled on the surface; two changes which sufficiently explain the great and sudden benefit usually produced by the incisions. The circumstance of the blood being directly taken from the inflamed part may account for its having an effect in lessening the inflammation, which would not be produced by taking a much larger quantity from the arm; and it will pro-

bably explain another fact, viz. that a very considerable bleeding in this way is not only safe, but advantageous, when the circulation is so much reduced that general bleeding would be altogether inadmissible.*

"As the free bleeding from the incisions is often of great advantage in relieving the overloaded vessels, and arresting the inflammation, it need not be checked so long as the pulse is unaffected by the loss of blood. But the great extent to which the hæmorrhage may proceed renders it necessary that we should act very cautiously, especially in elderly persons, or in those whose strength is already impaired by the disease or previous treatment. The patient should be closely watched by the surgeon in such cases, until the bleeding has ceased.* Should it become necessary to stop the further loss of blood, this may be readily accomplished by tying any bleeding vessels, by placing the limb in an elevated position, or by pressure."

Mr. Hutchinson, who has introduced the practice of incisions in phlegmonous erysipelas, recommends that these should be made about an inch and a half in length, from two to four inches apart, and varied in number from four to eighteen, according to the extent of surface the disease occupies. Since, says Mr. L. this multiplicity of cuts must be painful and alarming, it is important to know, as I have found by repeated experience, that a single incision carried through the middle of the inflamed part, in a direction parallel to the long axis of the limb is quite sufficient. I have seen severe phlegmonous erysipelas of the entire leg and thigh, when the aspect of the limb from enormous swelling, general redness, and vesication, was really appalling, suspended in the most decisive manner by a single incision along the middle of the calf. Mr. Guthrie† has found that one or two long incisions accomplish every useful purpose, and has therefore adopted that plan. As the numerous short cuts, or the single longer incision will equally answer the end, the selection may be left in each case to the patient or the surgeon. The incision should divide the skin and the cellular texture down to the fascia; it is not necessary to penetrate the latter. A double-edged bistoury is the most convenient instrument for the purpose."

Thirty-six cases are appended to illustrate the different forms and modes of treatment of this disease. These do not admit of condensation within any limits that we can afford. But they should be attentively perused, since they furnished the evidence on which Mr. Lawrence founds his views and practice.

Two cases of inflammation of the cellular tissue are also given to show the difference between that affection and phlegmonous erysipelas.

The second article is on the treatment of erysipelas by numerous punctures on the affected part, by R. Dobson, M. D. physician to the Royal Hospital at Greenwich. Dr. Dobson employs punctures in all the varieties of erysipelas; he makes from ten to fifty punctures, to the depth of from two to four-tenths of an inch. He repeats the punctures mostly twice a day, and often in bad cases three or four times in the twenty-four hours. In several hundred cases in which he has employed it, he has never seen any bad consequence result from it. He uses "these punctures in any part of the scalp, or face, body, or extremities, and never more freely than about the eyelids, and I have often found

* Death has resulted from a neglect of this caution.

† On Gun-shot Wounds, Third Edition, p. 108.

a patient with both eyes closed, which by freely puncturing he has been able to open in a few minutes; and what will be found not less true, than it may appear surprising, these punctures mostly heal in a few hours, and never entail any material marks upon the patient!"

Where puncturing has been practised from the first appearance of the disease, Mr. D. says that suppuration rarely takes place, and that it always diminishes the extent of that result, even in those cases which have existed for some days before it has been resorted to; but when matter does form under the skin, he lets it out without delay, but he thinks the integuments are more preserved by making several small openings, than by one large incision, and that the matter is quite as well evacuated. The adjuvants he uses are in the first place a brisk cathartic of extract of colocynth, scammony, and calomel; he then prescribes the following mixture, which, while it keeps up the free evacuation of the bowels, acts cordially upon the stomach. *R.* Mistur. camphor. f̄ij. — liq. ammon. acet. — tincturæ rhæi āā f̄ij. *M.* — Sumat cochlearia duo larga 3tiā vel 4tā quāque horā. He also employs a lotion composed as follows, viz. *R.* liq. ammon. acet. oss. — sp. camphor. f̄ij. — aquæ puræ f̄vij. *M.* It is no uncommon practice, he says, for him to prescribe wine or even gin, at the very time he is employing punctures twice or thrice a day!

The third article is a "case of erysipelas, with some remarks, by A. C. Hutchinson, Esq. F. R. S. L. & E. &c. The disease in this case was produced by a slight abrasion over the ridge of the right tibia. It was neglected for a couple of days, and then treated by Mr. Brooks with sulphate of quinine and wine; leeches to the inflamed surface, and poppy-head fomentations and an emollient poultice to the abraded part. When Mr. H. first saw the case, he did not consider it one in which incisions were called for, and he recommended a continuance of the previous remedies, but the next day he was startled at the appearance of a mortified patch of the integument of the size of a dollar; incisions were then promptly had recourse to, and with success.

Mr. H. thinks it becomes an important question, whether it might not, in the great majority of instances, eventually prove to be the best and safest practice to have recourse to incision at once.

Mr. H. "loudly protests againsts the practice of making the incisions of such length as recommended by Mr. Lawrence, both as unnecessary, and not so likely to stop the progress of the disease where it is spread over a wide surface, as several smaller incisions made on different parts, where the disease is found to be most active; for it will have been seen by the closely observing surgeon, that when this disease runs on to suppuration or to gangrene, for example, abscesses or gangrenous patches are occasionally found to have taken place in different parts laterally distant, and having no communication with each other. Now if one long incision be made in a direct line through the middle of the inflamed surface, according to Mr. Lawrence, the disease may be still unsubdued, though greatly lessened on each side of it, to a certain distance. But supposing the disease be found to occupy a space from the great trochanter to the toes, including the whole circle of the thigh, leg, and foot, which I have witnessed in two or three cases, wherein eighteen incisions were certainly made of an inch and a half in length, will one or even two incisions of fourteen inches in length arrest such an extent of disease? My experience teaches me

that they will not, and hence it is that I have stated that in such desperate cases we must have recourse to such a number of small incisions, according to the extent of inflamed surface, as will arrest the disease. It appears to me more than probable that the fatal case of erysipelas treated after this manner, and detailed by Mr. Lawrence with so much candour, might not have terminated so, had the incision been confined to an inch or an inch and a half; for it was in this case, if I mistake not, that he made his longest incision; but even here the patient ought not to have been lost, for surely the dresser or house-surgeon of the hospital, might have secured the bleeding vessels with a ligature: and therefore this case ought not to militate against the practice.*

Cases of tumours in the abdomen arising from organic disease of the stomach, with remarks by Edward I. Seymour, M. D. constitutes the fourth article. These cases form an interesting addition to our pathological knowledge, and we shall probably notice them in our periscope.

The fifth article is entitled "Observations on depositions of pus and lymph occurring in the lungs and other viscera after injuries of different parts of the body, by Thomas Rose, Esq. M. A. &c. This contains little that is novel; it is, however, a pretty good exposé of what is at present known on the subject, and four cases are given which occurred in the practice of the author. 1st. Abscess in the lungs, with extravasation of lymph and pus into the cavities of the pleura, occurring after wound and amputation of the arm. 2d. Abscess in the lungs, liver, and spleen, occurring after compound fracture of the leg. 3d. Abscesses in the lungs, liver, and articulation of the clavicle and sternum, with effusion into the thorax after a bruise and wound of the foot, and a fractured fibula. 4. Abscess of the liver and spleen after fracture of the skull. Three or four cases of the same description, communicated by Mr. Lawrence, are annexed.

The next article is on a peculiar inflammatory disease of the eye, and its mode of treatment, by William Wallace, M. R. I. A. &c. The attention of the profession was first called to this disease by Dr. Hewson, in his essay on venereal ophthalmia.* It is an inflammation of the iris, and perhaps choroid, the other parts being also subsequently in a greater or less degree affected; and occurs as a sequela of fever. Mr. Hewson found that placing the patient under the mercurial influence was the best mode of treatment. The disease was subsequently described by Mr. Jacobs,† who recommends that it should be treated by bleeding, locally or generally, in proportion to the urgency of the symptoms; blistering where there is much pain or intolerance of light; purgatives, antimonial medicines, the extract of belladonna in the form of an ointment, rubbed on the temples, and mercury; the relief from which latter remedy he says he has found so certain and decisive that he has trusted to it almost exclusively, with the assistance of belladonna. Mr. J. tried the sulphate of quinine in four cases, but without advantage.

Mr. Wallace describes this disease very minutely, but the principal object of the paper appears to be to recommend the use of bark for its cure. Mr. W. prescribes this remedy alone, or simply with such medicines as are suited to the regulation of the bowels, without premising blood-

* See Philadelphia Medical and Physical Journal, Vol. XIV. p. 222.

† Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, Vol. V.

letting or purging, and he says with the most decidedly good effects. He even thinks that the abstraction of blood in some cases considerably retards the cure. Mr. W. says, before he ascertained the utility of the bark that the disease was treated with depletion and mercury, and with ill consequences.

We shall not attempt to reconcile this discrepancy of opinion respecting the effects of remedies upon this disease, especially as each of these writers practise in the same city, appear to have seen the disease in the same description of individuals, and quote their *experience* in favour of their treatment; but we do hope at least that they will favour the public with the results of their future observations, and if it should be found that the remedies are suited to different stages or states of the disease, that for the credit of the profession they will point it out.

The paper of Mr. Wallace concludes the first part of the volume. The second part contains four papers; we have already, however, so far exceeded the limits that we assigned to ourself for this article, that we must content ourself at present, merely with giving their titles.—“ART. VII. Pathological and Surgical Observations relating to Injuries of the Brain, by B. C. Brodie, F. R. S. and Surgeon to St. George’s Hospital. Part. I.—ART. VIII. Analysis of a specimen of Cutaneous Perspiration, by J. Bostock, M. D., F. R. S. &c. With an account of the Case, by Richard Bright, M. D. Physician to Guy’s Hospital.—ART. IX. Of the Catarrhus Æstivus, or Summer Catarrh, by J. Bostock, M. D., F. R. S. &c.—ART. X. Case of Rupture of the Stomach produced by Vomiting, with some Observations, by J. N. Weekes, Esq. Member of the Royal College of Surgeons, and House-Surgeon at St. Bartholomew’s Hospital.”

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8. *The Morbid Anatomy of the Bowels, Liver, and Stomach, illustrated by a series of Plates from drawings after Nature, with explanatory letter-press, and a summary of the Symptoms of the Acute and Chronic Affections of the above-named Organs.* By JOHN ARMSTRONG, M. D. Lecturer on the Principles and Practice of Physic, and consulting physician to the London Fever Hospital. Fasciculi, 1 and 2. Lithographic plates. London, 4to. 1828.

We hail the present work from England with peculiar gratification, as affording an indication of the renewal of that light, which sunk as if finally extinguished, with the life of the philosophic BAILLIE. For a long time past, anatomy, in all forms, appears to have maintained a doubtful sort of existence in the United Kingdoms. While the continental schools have accelerated the progress of our science in an unparalleled degree, with equal honour to the profession and benefit to humanity, Edinburgh remains nearly where she was left by the second Monro and John Bell; and London has not transcended the rank of an A, B, C, school, the highest she has ever held since the demise of the great John Hunter. It is true that within this period some individuals have produced highly valuable contributions; Colles and Jacobs have worthily upheld the character of Dublin, and the transactions of the Irish College of Surgeons, and the Dublin Hospital Reports, have richly contributed to the domain of pathology. Nor are we, in thus speaking of the general character of England, relative to anatomical science, unmindful of the high merits of various public and private teachers, who are capable of performing works of the highest excel-

lence. But these are too few and inoperative to constitute more than slight exceptions to the general rule. As lovers of our profession, we cannot but regret that the immense scientific resources of England should have been of so little advantage to the world, when every thing connected with her situation has been such to entitle us to hope for far different results.

It is admitted by Dr. Armstrong, that from popular prejudice and professional inattention, the practical study of pathology is neglected by his countrymen generally; and if this admission were not made, it is sufficiently notorious to all those who are in the habit of examining the current English medical literature. A large proportion of these works are poor compilations, vamped up apparently to catch a temporary notoriety; or attempts at systematic composition, which exhibit an equality of narrow prejudice, and ignorance of the condition of knowledge out of their own especial atmosphere. Some such, who owe their small amount of merit to liberal borrowings from French and other foreign authors, arrogantly affect to treat with contempt the sources whence they have indirectly derived all their value.

Without the least invidious feeling, we may also take this occasion to remark that with exceedingly few exceptions, the medical periodicals of England are in a declining, and even corrupt condition; debased by the most rancorous personalities and undignified recriminations, appearing to be almost deserted, except by authors who write for notoriety, to the exclusion of the paramount interests of science, to which such works should be altogether consecrated. We pretend not to deny that the same censure has been merited by journals published in our own country, which we have uniformly discountenanced by our influence and example, to as great a degree as possible. But, in the case of our English cotemporaries, it is more especially to be regretted, on account of their authoritative position and extensive influence. The interests of science, and the dignity of our profession, equally demand of all those concerned in promoting the diffusion of knowledge, to abstain from intermingling local and transitory matters, with the great truths which they are endeavouring to accumulate for the enduring stabiliment of the healing art.

Dr. Armstrong has prefixed to his illustrations a preliminary discourse on morbid actions, written with plainness and perspicuity, in which he notes the changes occurring in the state of the fluids, under various circumstances; as well as the irregularities of distribution, in cases where the quantity and quality are not obviously changed. The facts he adduces concerning the states of the blood in various morbid conditions are highly interesting, though it is a defective mode of philosophizing to regard these changes as more than the consequences of previous alterations in the sensibility and actions of the solids, the organs of digestion, nutrition, sanguification, and assimilation. As consequences, not causes of diseased action, it is of great importance that the pathologist should be acquainted with them, since they afford satisfactory indications of defective or disturbed physiological action. Regarded as *causes* of disease, they serve but to mislead the practitioner to erroneous views of pathology, and into the use of the practice, incorrect, if not injurious, of expecting and prescribing for secondary symptoms, without arriving at a satisfactory perception of the actual state of his patient.

Dr. Armstrong talks of a "specific bronchitis in genuine typhus fever" as

the *cause* of the dark tongue, purple and dusky colour of the cheeks, &c. as if this "specific" bronchitis were an evidence of any thing more than the prostrated condition of the nervous energy, succeeding a very considerable irritation and impairment of the digestive and assimilative functions, and an engorged, oppressed, and exhausted state of the brain. To say that the face is dusky or purple, is to say that the blood is not sufficiently elaborated in the lungs; and that the bronchial mucous membrane is engorged, is merely one among many indications of exceeding waste or depression of the vital energies. The brains of such patients are found in the same state of congestion, and the inflammation of the brain, is just as "specific," and more the "cause" of the duskiness of the cheeks than the engorgement of the bronchia. This is proved by the recovery of patients from the lowest conditions of "genuine typhus," by treatment directed exclusively to the restoration of the balance of circulation. Thus, we have known a patient in this form of disease to have at the same moment pounded ice applied to his head, leeches to the epigastrium, and exceedingly hot water to his inferior extremities, by which a rapid recovery was induced." Here no attention was paid to the "specific inflammation" of the bronchia, nor to the lungs at all—but to relieve the most important viscera from an inequality of circulation, not to be sustained without throwing all the dependent functions into disarray.

The doctor also thinks that "as far as the remote occasions and ultimate effects are concerned, fevers might be advantageously divided into common and specific; the *common* proceeding from the ordinary agents of nature, such as heat and cold, used in the popular sense, and the *specific* arising from peculiar agents, such as putrid matter and the human contagions." We note this proposition as one founded more on scholastic ideas of fever, than upon the basis which is now afforded by general anatomy and physiology. The term fever is applied to an assemblage of disturbed healthy actions, or of disordered functions, which, resulting from a previous impairment of the nervous system, induces irregularity of circulation as the most immediate, and suppression of perspiration, laborious respiration, and different degrees of oppression or excitement of the brain, as the most striking consequences of such derangement. It is the *evidence* of an injury done, and whatever be the cause, whether common or specific, fever can only be known by such a disturbed state of system as above indicated. The states of action induced by different causes, signalized in books as different *fevers*, are mere modifications of the same symptoms, or affections of the same functions, and are restored to the healthy condition by slight modifications of the same treatment. The inflammatory fever of small-pox, and the inflammatory fever from common causes, show the same signs and demand the same treatment, though the one determines a pustular eruption in the external tegument, and the other, engorgement, effusions, and suppuration, in different textures and situations, when not speedily deprived of its violence. The same may be said of *fever* from any cause, whether from a poisoned or simple wound, from excessive repletion or extreme exhaustion. The expressions or *symptoms* by which it is decided to be present, differ in nothing but degree, and may all be comprized within irregularities of circulation, the immediate consequence of impaired nervous energy, producing all the other phenomena as consequences. Hence RUSH, (*decus et præsidium nostralis!*) was entirely correct in stating that fever was a disease of the

arterial system, if we refer to that part of our organization by which the presence of fever is most universally determined, and by the regulation of whose action, health is most speedily and certainly restored. There are specific textures in the body, having laws of healthy action peculiar to each; the changes of these actions, induced by noxious agents, produce nothing but violations of these laws, utterly irregular and extravagant, according to the vehemence with which they are affected, and the disproportions previously existing between the sensibility and activity of the various organic structures. Hence in every epidemic, no two individuals show *precisely* the same symptoms, in the same order, in equal violence or equal duration; neither can the same treatment be successfully applied to the individuals of the same family, born of the same parents, reared at one table, and educated to all appearance in precisely the same manner. This, (so called,) *disease* is said to be the *same* in each; it may be one of the famous specific *diseases* of the nosologists, small-pox, measles, or scarlatina; yet one has tremendous oppression and engorgement of the brain, with coma and a moderate eruption; another violent sore-throat, with high fever and universal eruption; and a third excessive pains of all the limbs, extreme depression, slight fever, and no eruption at all. Every man of observation has witnessed greater differences than these under similar circumstances, and if there were such realities as “specific” *diseases*, having *their own* laws, no such variations could possibly occur either in the symptoms or products of morbid action.

Our author next makes many interesting observations on induration, scirrhus, tubercle, and fungus encephaloides or hæmatodes, the latter especially as affecting the stomach. In reasoning on these results of morbid action, he does not appear very familiar with the inductions of Bichat or of Meckel, relating to the laws of normal and abnormal formations, which would have enabled him to present his own observations with far greater effect, than as simply insulated facts.

The spirit of inquiry, and zeal for the diffusion of professional knowledge, entitle Dr. Armstrong to our warmest admiration, and lead us to hope that we shall enjoy frequent opportunities of announcing his productions to the profession. With the modesty and delicacy characteristic of genuine worth, he has proffered his present essay to the profession, with a view of serving the cause of science, rather than to lay claim to distinction for himself, and such an example cannot fail to produce a laudable imitation. Whatever differences of opinion we may entertain, derived from a protracted and almost exclusive devotion to anatomical science, we fully appreciate the value of this work, which recalls attention to a much neglected subject of high importance, in a country where this study might be most rapidly advanced, by reason of the extent of its opportunities, and the excellent talents it can always command.

The two first fasciculi are devoted to illustration of morbid changes of the stomach and œsophagus. The plates are of a very superior character, and convey as satisfactory an idea as can possibly be imparted by drawing without *colour*, which must certainly be regarded as of great consequence in giving correct notions of such conditions. After the plates and descriptions, the author presents the symptoms of affections of different textures of the stomach, &c. These we cannot enter upon an examination of at this time; when the promised fasciculi reach us, we shall resume the subject, by presenting a

digested view of what Dr. Armstrong has done in this department of his work. It may be added, however, that as British physicians become more deeply imbued with correct views of general anatomy and physiology, which we have every reason to hope for, from the efforts now making in London, these morbid conditions of the stomach and digestive organs will become comparatively rare, in consequence of the general adoption of better medical practice. This is "a consummation most devoutly to be wished," both for them and for us.

J. D. G.

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9. *Elements of Physics, or Natural Philosophy, General and Medical, explained independently of Technical Mathematics, and containing new disquisitions and practical suggestions.* By NEIL ARNOTT, M. D. of the Royal College of Physicians. Third edition. London, 1828, pp. 647, 8vo.

To those engaged in any scientific pursuit, or who pretend to a liberal education, an acquaintance, with at least the elements of natural philosophy, is absolutely essential; and to none more so than to the physiologist. The extravagant applications of physics to physiology by Borelli, Keill, Hales, Micellotti, Pitcairn, and Bernouilli, may lead to a different opinion; indeed, at one period they produced the most violent prejudices against every explanation of the actions of living bodies on physical principles, and a denunciation of all such attempts; but this sweeping denunciation is not less absurd, than the endeavour to explain the mystery of the secretions, according to the sinuosities, the angles, the curvatures of the vessels, the shape and size of their pores, and the effects of friction, from which it derived its origin.

Living bodies are unquestionably endowed with vital properties which modify or control the operation of the physical laws, to which they are subjected; but it is as impossible to explain the phenomena which they exhibit by vital laws alone, as solely by physical laws.

The changes produced by the air on the blood during respiration, is partly a vital and partly a chemical phenomenon, but the passage of the air into the lungs on the dilatation of the chest, is solely a physical one; as are also the various sounds it produces in entering into the cells of the lungs, sounds which vary according to the size of these cavities, their contents, the thickness of their parietes, &c. phenomena which give rise to the most important means of diagnosis in the diseases of the chest, and which, from an ignorance of the laws by which they are produced, have been hastily condemned as uncertain; but are so invariable as the laws by which they are governed.

Without a knowledge of hydraulics, it is impossible to understand the phenomena of the circulation, or without an acquaintance with acoustics and optics, to comprehend the phenomena of hearing and vision, or to be able to remedy many of their defects. Illustrations might be adduced, ad infinitum, were it necessary, but the prejudices against the reference of many of the phenomena of living bodies, to the action of physical laws, is fast dying away, and it is admitted by all whose intelligence has kept pace with the progress of science, that an acquaintance with physics is an essential preliminary to the study of physiology.

The object of the work, the title of which stands at the head of this article,

is to communicate correct notions on this subject, and to explain the application of physics to physiology. The fact that the work has gone through three editions in less than one year, is sufficient evidence of the ability with which its author has executed his task, but if further is required, it will be found in the very favourable notices that have been taken of it in all the periodicals of the day.

As an American edition of the work is preparing, and as all who feel any interest in the subject, will probably possess themselves of a copy, we shall not occupy space with a more particular notice of it. We will merely remark, that the volume is devoted to the illustration of dynamics, mechanics, and hydrodynamics, under which latter term is included pneumatics, hydraulics, acoustics, and hydrostatics.

Optics, astronomy, &c. are to form the subject of another volume.

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10. *A short Treatise on the different methods of investigating the Diseases of the Chest, particularly by Percussion, and the Use of the Stethoscope.* Translated from the French of M. COLLIN, by W. N. RYLAND, M. D. Third edition, with additional Notes and Instructions, a plate of the Viscera of the Thorax, &c. London, 1828, pp. 86, 18mo.

A rational exposition of the Physical signs of the Diseases of the Lungs and Pleura; illustrating their Pathology, and facilitating their Diagnosis. By CHARLES J. B. WILLIAMS, M. D. London, 1828, pp. 193, 8vo. With 2 plates.

We notice these two works together, because they both treat of the same subject, and the object of both is to illustrate the diagnosis of diseases of the chest, and especially with reference to the signs afforded by auscultation and percussion. The first is a concise and admirable summary of what has been written on the subject, principally by Beauvais, Avenbrugger, and Laennec; illustrated by the observations made by the author during seven years residence in the hospitals of Paris, under the direction of able and well informed practitioners. The student should study this little work with attention; and in his visits to the hospitals, it should be constantly in his hand; he will receive from it much instruction and information, which, should he seek it elsewhere, he could not obtain without looking over many volumes.

The second presents a philosophical explanation of the physical signs of thoracic diseases, and points out the relation in which these signs stand to the physiological and pathological states that produce them. The value of symptoms, depends upon our ability to refer them to the causes by which they are produced, and thus to arrive at a knowledge of the physiological or pathological conditions of the different organs. It is not for the symptoms of disease that the physician is called upon to prescribe, but for the derangement of the organs or functions, which give rise to these symptoms. The immense progress which pathology has made within a few years, has done much to explain the rationale of the general symptoms of disease, but much remains still to be learned, and our materials for the purpose, it must be confessed, are as yet exceedingly scanty and imperfect. But physical signs stand on the broad and intelligible basis of physical laws, and are as readily explained as other phenomena, illustrated by natural philosophy; hence, the certainty of these signs, and their superiority

in investigating diseases over ordinary symptoms, or those dependent upon sympathies between the organs.

Dr. Williams shows the mechanism by which the physical signs of diseases of the lungs and pleura are produced, and the manner in which, according to fixed laws, they result as phenomena; makes a knowledge of the pathology predicate the signs, and a knowledge of the signs indicate the pathology; and by thus familiarising the mind with their principles, enables it to understand the multifarious forms which, by combination, these signs may assume, and to judge of the corresponding physical changes that modify or produce them. This is the only attempt of the kind we have met with, and it has left us scarcely any thing to be desired on the subject. If we are not greatly mistaken, it will lead to a better understanding, and a more correct estimate of the value of auscultation than any thing that has as yet appeared. It is no objection to the work, that some knowledge of the principles of natural philosophy, is necessary to understand it, since this science enters into every liberal scheme of education, and it is to be presumed, that it has formed one of the preliminary studies of every medical student.

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11. *A Manual of Modern Surgery, founded upon the Principles and Practice lately taught by Sir ASTLEY COOPER, Bart. F. R. S., &c. &c. and JOSEPH HENRY GREEN, Esq. F. R. S. &c. &c.* Edited by THOMAS CASTLE, Esq. F. L. S. Member of the Royal College of Surgeons, &c. London, 1828, pp. 337, 18mo.

This book is intended for students, and will be found useful by them. It presents in a small compass, the principles and practice taught by one of the most distinguished surgeons of modern times. It is divided into two parts. The first, which occupies five-sixths of the work, consists of practical notes selected from a series of lectures lately delivered by Sir Astley Cooper, Bart. &c.; the second of practical notes selected from a series of lectures on diseases of the eye, lately delivered by J. H. Green, Esq. &c. The work is published with the permission of Sir Astley and Mr. Green, and is dedicated to them; of course it may be considered as semi-official, and its correctness depended upon. The editor has been judicious in his selections and arrangement, and with great brevity has united an equal degree of clearness.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *On Different Kinds of Malformation of the Heart.*—"M. GENDRIN observes that the principal defects in the conformation of the heart, are preternatural communications between the cardiac cavities, from the absence of the interventricular partition; irregularity of the vascular orifices of the organ, for instance, the transposition of the aortic orifice to the right ventricle; contraction or total obliteration of the pulmonary artery, and in its place the existence of a solid cord without any cavity. M. Gendrin concludes, from his own observations as well as from those of other physiologists, 1st, that the heart at first is formed of only one cavity; 2nd, that after a time the organ is divided into two cavities, namely, an auricle and a ventricle; 3d, that at a still later period these cavities are each divided into two, which, nevertheless, still communicate for a long time, owing to the imperfection of their partitions. From these general and incontestible facts, M. Gendrin advances the following propositions: The pulmonary arteries arise originally from the aorta, by the intermedium of the *canalis arteriosus*; it is at a later period that the trunk of the pulmonary artery is formed; the development takes place from without inwards, towards the heart, owing to a mechanical impulse from behind: it is only when the pulmonary artery has arrived at and joined the ventricle that the interventricular communication is closed: the pulmonary veins open originally into the superior cava; it is only by the development of the superior part of the single auricle that the pulmonary veins arrive at the auricle of the heart, and it is only at this period that the formation of the interauricular partition commences to be formed. Whatever the varieties may be in the malformation of the heart, still they are subordinate to a regular and constant succession of changes which operate in the organ; neither the aortic nor the pulmonary arteries ever open into the auricle; neither the venæ cavæ nor the pulmonary veins ever open into the ventricles; neither the right auricle nor the left ventricle is ever wanting if the organ has more than one cavity; the pulmonary veins never open into the inferior cava nor into the aorta; the pulmonary arteries never open into the venæ cavæ; when the interventricular partition is imperfect, the imperfection is always at its superior part, towards the base of the heart, and never at the inferior part, towards the apex of that organ; when the orifice of the pulmonary artery does not exist, or when it exists imperfectly, the *canalis arteriosus* is never obliterated. It is the same when the aortic orifice is not free, but in this case the orifice of the pulmonary artery always exists. When the orifice of the aorta, or that of the pulmonary artery is more or less completely obliterated, there always exists an opening in the interventricular partition; when the pulmonary artery is imperfect, the imperfection is always at the orifice, and never further on towards the *canalis arteriosus*. If the *canalis arteriosus* is obliterated at the time of birth, the arteries, both aortic and pulmonary, are always completely formed and open

into the same ventricle; or if they open into separate ventricles, there is a communication between them through the partition which divides them."—*Journal Général de Médecine*.

2. *Case of Imperforate Vagina*.—The following interesting case was lately presented to the Royal Academy of Medicine by M. HERVEY DE CHEGOIX. A young lady, who had enjoyed good health until she was fourteen years of age, was attacked at a ball with very violent colic. A copious discharge of blood from the nose was followed by immediate relief. The attacks of colic afterwards returned, at first every month, then every fortnight, and at length every day, accompanied by symptoms of hysteria. Opium and other antispasmodics were prescribed without any beneficial effect. Some mal-formation was now suspected, and an accurate examination of the genital organs was therefore made by M. Villiaume. The abdomen was as large as at the sixth month of pregnancy. The external organs of generation were naturally formed: the hymen existed, but there was no vagina. A finger was introduced into the rectum, and in the ordinary situation of the vagina nothing but a dense cellular substance could be detected. At sixteen years of age, the young patient appeared to be in a hopeless condition. A sound was now introduced into the bladder, and held by an assistant. The rectum was at the same time depressed by a finger introduced per anum, and M. Villiaume made an incision through the hymen, of about eight or ten lines in length; carefully avoiding the urethra and rectum, he penetrated to the depth of about two inches, and then found his instrument in an open space; no discharge, however, followed. M. V. detected the body of the uterus much distended, and leaning towards the right side: he endeavoured to place the womb in its natural situation, but as he could not succeed, he plunged an instrument into it, and made a free puncture. A small quantity of thick, inodorous blood escaped. The patient was shortly put into a warm bath, and a very copious discharge passed through the wound in the uterus. A pledget of lint was introduced, and, to prevent an attack of inflammation, leeches were freely applied to the hypogastric region. The patient suffered much pain until an abundant discharge of fetid blood took place. From this time she gradually improved in health, and in about a month the artificial canal was healed. By the use of a gum elastic bougie, it was made large enough to admit a little finger. Two years have elapsed since the operation. The patient continues well, excepting that at the menstrual periods she suffers pain. It is said that this is the only operation of a similar nature which has been successful.—*Archives Général*, Dec. 1827.

3. *Apparent Hermaphroditism*.—M. HERVEY communicated to the Academy the result of the dissection of the genital parts of a subject, seventeen years of age, who died at the hospital of Bourg. The anatomical piece had been sent to the Academy by the physicians of that hospital. The individual from whom this piece was taken had been entered as a female in the civil register, and had been trained up in the habits of that sex. It was remarked that this individual courted the society of young girls, and was afraid of the boys, for they lifted her clothes to satisfy themselves of her sex, respecting which there was some doubt in the village. It entered the hospital in the beginning of December, for a pulmonary affection, and died on the eighth of January.

It had no mammae. The pelvis presented none of the characteristics of the female sex in its form, save that the pubis projected like that of females; it had no hair. On both sides of the pubis there were two oblong, wrinkled projections which contained two small, well-formed testicles. The penis was twenty two lines long, imperforate, and presenting two corpora cavernosa; the glans, round and thick like a cherry, had a superficial sulcus underneath, in the situation of the meatus urinarius. On the perineum there was a fatty tumour of the size of an egg. In the bend of the thigh, on the left side of the tumour, there was an orifice which communicated with the bladder by a canal three inches

long; there was a similar canal on the right, but it was imperforate outside. The vasa deferentia, well-formed, opened into the vesiculæ seminales, which were also properly formed, and situated in their natural position. The bladder and prostate gland did not offer any thing particular in their conformation. The physicians who opened the body found a vast cavern in the substance of the right lung. This individual was of a weak constitution; but the members, especially the lower members, were well-developed and showed a great contrast to the meagerly appearance of the rest of the subject.

It is evident, from these details, that this individual was of the masculine sex, and that it did not differ from male subjects except in the anormal conformation of the external genital organs.—*Journ. Gén. de Méd. February, 1828.*

4. *Remarks on the Stomach of Man.*—Dr. S. TH. DE SÖMMERING has shown, 1st, that the stomach of the negro differs from that of the European in being of a more rounded form, approaching that of the ape; 2d, that the contraction which is observable towards the middle of the stomach in some individuals, is met with almost exclusively in females, and appears to arise from the continued pressure of the corset bone on the epigastrium; it never occurs in infants; 3d, that the pyloric orifice differs in different individuals, its modifications depend upon a glandular ring, which forms the contour of the opening, and may be seen by dissecting off the peritoneum and subjacent cellular tissue.—*Bull. des Sci. Méd. June, 1828.*

5. *On Valves in the Pulmonary Veins.* By Professor MAYER.—In all systematic works on anatomy, we find it asserted that the pulmonary veins have no valves. It is unnecessary to prove this by multiplied citations—Waller among the ancients, and Meckel as the most modern writer, will suffice. The former says, in his *Elementa Physiologiæ*, t. i. p. 145, “Sed etiam vera pulmonalis absque valvulis est;”—and Meckel, in his *Human Anatomy*, vol. iii. p. 368, remarks that the pulmonary veins are usually without valves, with some very rare exceptions.

Professor Mayer's attention was first called to the valves in these vessels by finding them very numerous and very large in the pulmonary veins of the cow, although on looking for them in swine, he found them absent.

In man, however, he found them, on examination, both large and numerous; so that it is difficult to understand how they should have escaped observation. A valve is always met with at the place where a venous branch joins the larger trunks at an acute angle; and the more acute this is, so much more marked is the valve. But where the branches join at a right angle no valve exists; which is precisely what takes place in the other parts of the venous system, as in the extremities, where valves exist where a branch joins the larger trunks at an acute, but not where this happens at a right angle. From this we see why it happens that fewer valves are met with in the pulmonary than in other veins; because the ramifications of the pulmonary veins chiefly take place at a right angle. This form of distribution occurs particularly in swine—and hence in their pulmonary veins there are no valves.—*Zeitschrift der Physiologie, Tom. III. p. 155.*

6. *Microscopic Researches upon the intimate structure of Animal Tissues.* By M. RASPAIL.—This memoir of a skilful and conscientious microscopic observer, is entirely opposed to the facts lately advanced by Messrs. Prévost, Dumas, Milne Edwards, &c. The following presents a rapid analysis.

1. The membranes isolated and reduced to their essential consistence, are not composed of globules perceptible by our means of observation, and however coarse those examined may be, their surface will appear smooth and not granulated. If a filament be taken from a membrane, serving as a sheath to the muscular fasciculi, and placed in water, examination with the strongest microscope will only show a smooth surface, as transparent as the water itself.

Some granulations of an irregular size and form, may be observed upon this surface, but these are evidently nothing more than little fatty follicles which do not properly belong to the membrane.

2. *The Blood.* The form and size of the globules differ in different men, as well as in various animals, and according to the vessels in which they have been found. They are smallest in the capillaries. The globules are vesicles filled with a substance probably albuminous. Those of the blood in nowise differ from those found in all the animal tissues.

3. *Epidermis.* The epidermis offers to the microscope the appearance of a bed of cells of greater or less thickness, flattish and in their outline irregular. Here and there, in their interior, granulations of various forms and sizes are perceptible, separated by spaces in which not the smallest globule is to be seen. The epidermis is nothing more than the external bed of the dermoid cells hardened by the air. The hairs are developed in the same manner as those of vegetables, from which they only differ by containing a fatty substance in their internal cells. The pits designated by Eichborn as the origin of the perspiratory canals, are to be seen, but the opening of these canals are not perceptible.

4. *Nervous Tissue.* If a filament from a nervous trunk, be examined by the microscope, the trunk is seen to consist only of an agglutination of cylinders, the fiftieth part of a millimetre in diameter. Fontana has proved that these cylinders are composed of a smooth and transparent membrane containing within "a glutinous, elastic and transparent matter, that does not dissolve in the water in which the cylinders float." Having pressed out this matter between two glasses, he caused it to return again by diminishing the pressure. M. Raspail considers each of these cylinders as a celule which has grown only in length. It encloses a true cellular tissue, imbued with a homogeneous and fatty substance. It is without any longitudinal cavity. In its growth, it extends itself from the encephalon to the extreme ramifications.

5. *The Muscular Tissue.* The last analysis of this tissue, shows it to be composed of cylinders wound together spirally, and closely glued together. In the ox, the size of these cylinders is one-twentieth of a millimeter. They are full like those of the nerves, from which, however, they differ by their rose colour. Their smooth sides exhibit cells on their interior, varying in form and size. Each fasciculus of cylinders is enveloped by a smooth sheath. Several of these bundles thus united together are again enclosed in a common sheath, and so on in succession.—*Journal des Progrès, Vol. IX. from the Répertoire d'Anatomie, &c.*

PHYSIOLOGY.

7. *Case of Disease of the Brain, illustrating the Functions of the Fifth Pair of Nerves.* By E. STANLEY, Esq.—"A lady, aged forty, was attacked, immediately after her confinement, with fever and inflammation of the brain; after which, she suffered severe and almost constant pain in the head. Again becoming pregnant, she was confined about three months before her death. When nearly recovered from this confinement, she was attacked with pain in the head, more acute than usual, and delirium. These symptoms subsiding, hemiplegia supervened, and continued through the remaining two months of her life. During this period, the following circumstances were particularly noticed:—

"The hemiplegia was on the left side. In the face, sensation and motion were completely lost. In the arm and in the leg sensation remained.

"There were frequent attacks of erysipelas in the face, but confined to that side which was deprived of sensation and motion.

"In the left ear hearing was completely lost.

"In the left side of the tongue sensation was lost, but motion remained.

"Whilst in the right nostril, the mucous membrane was pale, in the left nostril it was constantly of a deep red colour, and there were several discharges of blood from it.

"In the left eye the vessels, first of the conjunctiva, then of the deeper membranes, became inordinately distended with blood. Opacity and ulceration of the cornea soon followed, with the escape of the aqueous humour, and complete disorganization of the globe.

"Upon the subsidence of the delirium which preceded the hemiplegia, the intellect became clear, and remained so to the moment of death.

"The medical superintendence of the preceding case was confided to Dr. P. M. Latham and to Mr. Eyles. I visited the patient in the latter part of her illness, and the opportunity was given me of examining the brain, which presented the following appearances:—

"Effusion of transparent fluid into the cellular tissue of the pia mater, and into the ventricles, to the extent of about four ounces.

"Enlargement of the tuber annulare, especially on its left side, and in a direction to compress the fifth and seventh nerves against the basis of the skull. A section of the tuber annulare discovered within it a tumour about the size of a walnut, occupying its whole of its left side, and extending into the left crus cerebelli. The consistence of the tumour was firm, its colour brown, and specks of blood were dispersed through it. From this morbid structure the fifth and seventh nerves were detached. When examined close to their respective foramina in the basis of the skull, these nerves presented no unusual appearance in size or texture.

"The history of the foregoing case may be interesting to physiologists, as it records an instance of disease in that part of the brain whence the fifth and seventh nerves are detached, producing in the parts supplied by those nerves certain effects agreeing with the experiments of Magendie and others. Here, however, was an experiment of Nature's own making, free from the objections which may attach to experiments upon living animals.

"In the case now related, the morbid changes in the eye, consequent on the disease, at the origin of the fifth nerve, were precisely the same as are reported to follow the division of this nerve in a living animal. The abolition of the functions of the fifth nerve in the human subject by disease, and in the brute by its division, was alike followed by inflammation, destructive of the eye; and in the case before us, the excitement of the blood-vessels in the parts deprived of sensation and of motion, was further manifested in the erysipelas of the paralyzed cheek, and in the inordinate repletion and rupture of the blood-vessels in the nostril of the same side."—*London Medical Gazette*, Vol. I. No. 18, 1828.

8. *Case in which there was a diminution of Sensibility on one side, without loss of the power of Motion; and a loss of Muscular Power on the other side, without any diminution of Sensibility.* By H. LEX, M. D.—The following case is extremely interesting, as illustrating in a striking manner the distinct functions of different nerves, as recently pointed out by Mr. Charles Bell, and some of the continental physiologists.

"Mrs. W. was delivered by a midwife at Kilburn. Her labour was easy, but followed by profuse hæmorrhage upon the separation of the placenta, and after its exclusion from the uterus.

"She revived from the state of exhaustion immediately consequent upon the loss of blood, but at the end of about three or four days, became feverish, and complained of severe head-ache; for a week, however, she had no other assistance than that of the midwife.

"At the end of this time, (about ten days after her delivery,) the head-ache continuing, and being now accompanied with some degree of 'numbness on one side,' I was requested to see her.

"I found her labouring under severe head-ache, not confined to, but infinitely more violent upon one side than the other, and occupying the region of

the temporal and occipital bones above the mastoid process, and attended with considerable pulsation.

"Upon one side of the body there was such defective sensibility, without, however, corresponding diminution of power in the muscles of volition, that she could hold her child in the arm of that side, so long as her attention was directed to it; but if surrounding objects withdrew her from the notice of the state of the arm, the flexors gradually relaxed, and the child was in hazard of falling.

The breast, too, upon that side, partook of the insensibility, although the secretion of milk was as copious as in the other. She could see the child sucking and swallowing, but she had no consciousness from feeling that the child was so occupied: turgescence of that breast produced no suffering, and she was unconscious of what is termed the *draught* on this side, although that sensation was strongly marked in the other breast.

Upon the opposite side of the body there was defective power of motion, without, however, any diminution of sensibility. The arm was incapable of supporting the child; the hand was powerless in its gripe; and the leg was moved with difficulty, and with the ordinary rotatory movement of a paralytic patient; but the power of sensation was so far from being impaired that she constantly complained of an uncomfortable sense of heat, & painful tingling, and more than the usual degree of uneasiness from pressure, or other modes of slight mechanical violence.

"Medicinal agents, including blood-letting, general and local, blisters, purgatives, &c. directed, first by myself, afterwards by Dr. P. M. Latham, to whose care I directed her in the Middlesex Hospital, were of little avail, and she at length left the hospital scarcely, if at all, benefited.

"At the end of a few months she again proved pregnant. Her delivery, at the full time, was easy and unaccompanied with hæmorrhage, or other formidable occurrence, but at the expiration of about ten days she complained of numbness on both sides. Her articulation was indistinct; she became more and more insensible, and sunk completely comatose.

"Upon examination of the body no positive disorganization of brain could be detected. The ventricles, however, contained more than usual serum; and there were found, more especially opposite to the original seat of pain, thickening, and increased vascularity of the membranes, with moderately firm adhesion in some parts; in others, an apparently gelatinous, transparent, and colourless deposit interposed between them."—*Ibid*, Vol. I. No. 25, 1828.

9. *On the Effects of the Division, or Organic Lesion of the Fifth Pair of Nerves.*—It appears from the experiments of M. Magendie, H. Mayo, and C. Bell, on the action of the cerebral nerves, that on the division of the fifth pair, or when it is in a diseased state, the eye undergoes some peculiar morbid alterations. M. Magendie informs us, (*Journ. de Physiol.* IV.) that after the division of this nerve, the cornea becomes opaque, and that it, as well as the iris, begins to inflame and suppurate; an infusion of lymph takes place in the interior of the eye, and gradually the whole globe passes into ulceration. All these experiments, however, did not satisfy M. Magendie, and could not in fact, lead to a clear result, as on dividing the nerve, the internal carotid was invariably wounded; he therefore, in more recent experiments, divided the nerve before it passes over the *pars petrosa*, and then obtained an effect somewhat different from that described before; the eye was much less altered, the inflammation occupied its upper portion only, and but a very small segment of the upper circumference of the cornea became opaque. It appears, then, that the fifth pair of nerves exercises a direct influence on the nutrition of the eye; the different results of the experiments are easily accounted for by the circumstance, that in the former experiments of M. Magendie, the ophthalmic artery was separated from the internal carotid, and that thus the nutrition of the eye necessarily became affected.

The following pathological fact, reported by M. Serres, confirms the expe-

riments of M. Magendie. A young man was admitted in the Hôpital de la Pitié, on account of epileptic attacks; at the same time a slight inflammation of the right eye was observed, the cornea was opaque, and the sight was to a considerable degree affected. All these symptoms gradually increased, till the sight was completely lost, and the right eye and eyelid, as well as the right side of the nose and tongue, were quite insensible. The patient died eleven months after admission, in a violent epileptic fit. On examination, the ganglion of the fifth pair was found enlarged, of a yellow colour, and very vascular; and on its exit from the pons varolii, the nerve was covered with a gelatinous mass.

Professor Mayer, of Bonn, (*Journ. der Chirurg. und Augenheilk.* T. x.) has recently performed many experiments, from which it appears that not only the division of the fifth pair is followed by morbid changes of the eye, but that the same effects take place after wounds of the neck. From eighteen experiments on dogs, horses, and pigeons, he comes to the following result:—1. The division of the cervical portion of the sympathetic nerve was sometimes made without any effect on the nutrition of the eye; in other cases it was followed by redness and inflammation of the conjunctiva. 2. The same morbid change, in most cases, followed the division of the pneumogastric nerve. 3. The sympathetic and pneumogastric nerve having been divided, a very intense inflammation of the eye took place, which extended to its internal parts. 4. If the carotid was tied, and at the same time the nerves in its neighbourhood were carefully avoided, the nutrition of the eye was in no manner influenced. 5. After a ligature of both carotids, the eyes suffered more or less; they became dim and opaque, but very seldom a complete disorganization ensued. 6. But if the ligature comprised the pneumogastric or sympathetic nerve, an effusion took place from the anterior surface of the iris, the pupil was closed by a false membrane, and the cornea passed into suppuration.

10. *Vision after Destruction of the Optic Nerves.*—MAJENDIE gives an instance of sight existing after the destruction of the optic nerves, in a man by name of Bardon, who was admitted into the Hotel Dieu, in 1827, and there died. On dissection, the following appearances presented themselves. In the interval between the crossing of the optic nerves and the pons varolii, was a cyst of the size of a small egg, this cyst was filled with a yellowish matter, of which one-third was solid, on the sides, and above, the cyst had flattened and almost destroyed the optic nerves, all that remained of them were portions of cerebral substance adhering to the cyst, and which were wholly deficient at the commissure; in fact, there was no connexion between the eye and brain, except by the cyst. This patient could distinguish objects a few days before his death.—*Bull. Sci. Med. April*, 1828.

11. *Five Children at a Birth.*—"A peasant of the village of Soukin, in the department of Nijegorod, twenty-five years of age, of short stature and robust constitution, was married at seventeen. The second year of her marriage she had one child; the fourth year she produced twins at the eighth month. In November, 1824, she was brought to bed of five children—viz. on the 9th, 10th, 12th, and 13th, four females, and on the 16th a boy. None of these exceeded eight inches in length. The girls died within a week: the boy appears to have lived. As to the mother, she entirely recovered a month after her accouchement; the only circumstance worthy of remark having been an extraordinary size of the belly. No similar instance had occurred either in her family or that of her husband. The above is related by Dr. Gaievsky, in the *Voienno-meditsinski Journal*, a paper on military medicine, published at St. Petersburg."—*London Medical Gazette*, Vol. II. No. 29, 1828.

12. *Case of Superfatation, the Uterus being naturally formed.*—A woman forty-two years old, became pregnant the second time in September, 1825. Two

years before she had been delivered of a son. Her health was perfectly good during the whole period of pregnancy; and there had been no appearance of the menstrual discharge. On the 28th of April, 1826, she felt a large body in the vagina, and applied to a midwife. Upon examination, it was ascertained to be a fœtus, contained in the membranes. In the middle of the same day the fœtus was expelled, together with the membranes, without any discharge of blood. After its expulsion, the attendant discovered another bag of membranes, and the patient was sensible of a moving body in the uterus. In the middle of the night the pains begun, and she gave birth to a second living fœtus; it was very imperfectly developed, and was contained in a single membranous sac.

Dr. FARRENIEST was immediately applied to: he found the fœtus was four inches long, and presumed that it had arrived at about four months. The limbs were easily distinguished, but were not furnished with nails. The head bore the usual proportion to the body. The fœtus first born was evidently at the full period, and this opinion was confirmed by the time of the cessation of the menses, to which the woman had paid particular attention. Many physicians have denied the possibility of these cases of superfœtation which have been occasionally recorded.

Dr. F. therefore conceived it incumbent upon him to publish this case, for the authenticity of which he holds himself responsible.—*Rust's Magazin*, 1827.

13. *Case of Superfœtation.* By M. CASTES.—A mare having been successively covered by a stallion and a jackass, gave birth almost simultaneously to two individuals of different races.—*Archives Générales, May, 1828, from the Journ. Prat. de Méd. Vétér.*

14. *On the Connexion between Respiration and Circulation.*—Some interesting observations relative to the connexion subsisting between these functions, have been lately addressed to the French Academy by M. DEFERMON. Their mutual dependence, though recognized from the earliest times, has never before been precisely determined.

From numerous experiments, M. D. says he has ascertained that the venous blood, propelled by the right ventricle of the heart into the pulmonary artery, and thus carried to the lungs, cannot return through the pulmonary veins until the aerial cells are collapsed by expiration. During inspiration, whilst the cells are distended, the passage of the air is momentarily interrupted, the immediate effect of which interruption is to prolong the contact of the air with the blood, and render the oxygenation more perfect. M. Defermon makes one important practical application of this explanation, which is, that inflation of the lungs in cases of suspended animation, far from facilitating the return of life, places a new obstacle to the re-establishment of the pulmonary circulation by distending the air cells. This fact, he says, is in confirmation of the precept given by Leroy d'Etiolles.—*Revue Médicale, May, 1828.*

15. *On the effects of Galvanism on the Nerves.*—Of the numerous experiments which have been instituted to verify the analogy between galvanism and the nervous action, those of WEINHOLD are not the least interesting or least curious. The following are the most remarkable.

He beheaded a cat, and after pulsation and muscular action had completely ceased, he removed the spinal marrow, and filled the vertebral canal with an amalgam of mercury, zinc and silver. Immediately the throbbing of the arteries recommenced, and the muscular actions were renewed, which it was impossible to distinguish from those which are produced by the influence of the spinal marrow; the animal made many leaps. When the irritability appeared exhausted, Weinhold, by means of a metallic arc, placed the heart and voluntary muscles, gradually in contact with the artificial medullary substance, and he revived again general but feeble contractions.

He filled with the same amalgam, the cranium and vertebral canal of another cat, which did not give any sign of life; the animal became during about twenty minutes in such a state of vital tension, that it raised its head, opened its eyes, looked steadily, attempted to walk, and endeavoured to rise after falling down frequently. During all this time the circulation and pulsation were very active, and continued for a quarter of an hour after the chest and abdomen were opened. The secretion of the gastric juice was evidently more abundant than ordinary, and the animal heat was perfectly re-established.

Weinhold filled also the cranium only, of a dog with the same amalgam, he examined then the principal functions of the senses, and observed that the pupil still contracted, that the animal manifested still a desire to avoid the light, when a lighted candle was placed near it, and that it listened when a person struck with a key upon a table.

Weinhold remarked also that the two extremities, of a divided nerve, gave sparks when they were brought together. He divided the crural nerve in a cat, and placed the extremities at the distance of a line apart, and connected them by a metallic arc: the moment when he completed the chain, he saw at each extremity of the nerve a luminous point, but they did not pass from one to the other.

The hypothesis of nervous atmosphere has been completely subverted by the experiments of Weinhold, in which, after having cut the crural nerve, he could not excite the contraction of the thigh by means of galvanism, although the extremities of the nerves were at the distance of a line or even of a quarter of a line. The ligature even of nerves prevents the propagation of galvanism. He observed further that the nervous pulp is the only conductor of the galvanic action, whilst the neurilemma is entirely deprived of this power.

Weinhold has observed even material changes which happen in the nervous system during the action of galvanism. Having isolated the crural nerve of a frog, he observed that the medulla of the nerve, which was almost transparent, retracted during the contraction of the muscles, produced by galvanic irritation, and that this retraction alternated with the dilatation. He laid bare the tracheal nerve of a rabbit, and he observed that after having produced twenty or thirty rapid contractions of the members, by means of a galvanic pile, the size of the nerve was diminished, lost its cylindrical form, and ultimately was reduced to a simple white and compressed tube. This loss of substance of the nervous medulla, during the action of nerves, was in the space of twenty or twenty-five minutes, repaired by the increase in the beating of the heart coinciding with the violent contractions of the muscles; so that the nerve after a certain time, was restored to its cylindrical form. When on the other hand, the heart is extirpated so that the reparation of the loss of nervous substance, cannot be effected by means of the circulation, the atrophied nerve does not regain its primitive form. Weinhold has observed the same loss of substance in the portion of the spinal marrow, where the nerves of the anterior extremities go off, when he made the muscles of these members contract by means of violent and continued action of the galvanic pile, directed to its nerves. During the action of the nerve, not only the mass of the nervous substance diminishes, but also its consistence. When he divided a nerve, and irritated it a long time by means of galvanism, he observed that the nervous matter gradually became softer, and finally flowed guttatim, from the extremity of the divided trunk.—*Journal des Progrès*, Vol. X. 1828.

These are certainly marvellous experiments, and if their correctness should be confirmed by further observations, we need no longer despair of the Promethean art being unattainable.

16. *Case illustrative of the effects of a Division of the Spinal Marrow, between the third and fourth Dorsal Vertebrae, in the Human Subject.* By WILLIAM WALLACE, Esq.—Mr. Wallace was called on to visit a man who had fallen from a drawing room window into a deep area. Upon examination, by passing his

finger along the spine, with some degree of pressure, he felt a very obscure crepitus, as if the spinous processes of those dorsal vertebræ which lie between the scapulæ, were broken; and when the pressure was increased at this part, it appeared to cause intolerable distress. For four hours the patient was in a state of frenzy; at length he became comparatively tranquil, and answered collectively every question that he was asked. He had no sensibility, or power of moving his lower extremities; or, to use his own words, he was dead from the chest downwards. In fact from the seventh vertebro-sternal rib downwards, all was insensible, and incapable of motion. With a catheter (the introduction of which he did not feel) the urine was drawn off; blood was abstracted from the arm, though it could be procured but scantily; purgative enemata were administered without any effect, and the stomach rejected every thing that was swallowed. Being questioned as to the sensations which accompanied the vomiting, he said he was not at all sick, nor were his feelings such as he had experienced on other occasions during the effort of vomiting. He appeared to have some power of suspending that action of the stomach, which caused the discharge of its contents; and when he directed his attention particularly to it, he was able to retain his drink for a short time. With a view to procure some evacuation from the bowels, frictions on the abdomen were tried with a mixture of jalap, rhubarb and gamboge, in mucilage of gum Arabic, as recommended by Alibert; but all in vain. Hiccup now supervened, as well as violent palpitation of the heart, which beat with great frequency, and with such force as to be observable through the sheet.

It was in this distressing state of things, that it occurred to Mr. Wallace to add some tartar emetic to his whey, in the proportion of a grain to the pint, and this beverage was given him *ad libitum*, which was followed by the most beneficial effects. The bowels began to act copiously, and the hiccup and vomiting ceased. However, on the ninth day after the accident, the patient died.

Dissection.—On exposing the condition of the vertebral canal, the spinal marrow, with its proper membranes was found torn across at the part which corresponds to the interval between the third and fourth dorsal vertebræ. Its lacerated ends were separated to the extent of half an inch, and the interval filled with blood. The spinous processes of the second, third, and fourth dorsal vertebræ were fractured at their root; but, viewed from the thorax, the spine did not present any marks of injury. In the head, the superficial veins of the encephalon were very much distended, and a thin stratum of effused blood covered the posterior, superior and the external surfaces of the posterior lobes of the brain, and part of the surface by which they correspond to the longitudinal fissure. In the abdomen, there was an extensive inter-susception of the small intestine. The liver was charged with black blood. The gall-bladder, very much contracted, contained about two drachms of a viscid, colourless, and insipid fluid, resembling, in its appearance, the white of an egg. In the chest, the pleura was fully and minutely injected with dark-coloured blood. The lungs were firm, and did not collapse, being gorged with black blood. The right ventricle of the heart was considerably dilated, and filled with coagulum. There were two circumstances relating to the general condition of the body after death, which, taken in connexion, seem to be worthy of note. These were the extreme rigidity of the muscular system, and the protracted continuance of vital heat; from which it would appear that there is no foundation for Rysten's hypothesis, that 'in mammiferæ and birds, the moment rigidity of the muscles begins, is the same in which the vital warmth is extinct, &c. The temperature of the paralyzed parts did not suffer any diminution. Hence if Mr. Brodie's opinions be well founded, that the brain is the source of animal heat, and the spinal marrow the organ of its transmission, we must conclude that it performs this function by means of the trisplanchnic nerve, and not by its own peculiar nerves. Mr. Wallace very properly doubts whether the discharge from the bowels, on the fourth day, resulted from the

tartar emetic or from the effect of the injury itself. When a bladder has been paralyzed from injury of its nerves, retention of urine is the immediate result; but sooner or later, this is followed by incontinence, as was the case in the present instance. This phenomenon is to be explained by a law to which the action of the nerves appears to be subject, viz. one degree of pressure or irritation will produce spasm, or convulsion, and a greater degree of the same will cause loss of power or paralysis. This law will be found to govern the muscular system, voluntary and involuntary, and consequently the sphincters. The inflammation of the thoracic viscera, and the violent action of the heart, may very well be accounted for, from the direct operation of the injury to the spinal cord. In that diseased state of the cord, which accompanies curvature of the spine from caries of the vertebrae, the pectoral organs experience much distress. The relations of the intercostal nerve with the spinal column, would perhaps satisfactorily explain the phenomena in both cases.—*Transactions of the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, Vol. V.*

17. *New Researches on the Immediate Agent of Vital Movements.* By M. H. DUTROCHET.—In our second number, page 423, we gave an account of the interesting experiments of M. Dutrochet on vital motion. Since the publication of these experiments, he has renewed his researches; and on the 17th of March last he read to the Royal Academy of Medicine a memoir on the subject, from which we select the following observations:—

“A tube of glass is furnished with an appendage similar to the flag of a trumpet; this part is formed of a piece of bladder. Water is poured in this appended bag, and the whole plunged into a vessel of water. The water in the interior of the instrument is connected with the negative pole of a Voltaic pile, the exterior water with the positive. The fluid is forced by the electricity through the membrane, from the positive to the negative pole, and mounts in the tube and is elevated above the water in the vessel. If the membrane is replaced by a plate of baked clay, the same phenomenon of *endosmose* occurs, but does not take place when a slip of sandstone, or of carbonat or sulphate of lime is employed. Thus the porous lamina which separates the two differently electrified fluids, evidently has a peculiar power in the production of the phenomenon of *endosmose*. This lamina is *active* when there is *endosmose*, and *inactive* when this does not occur.

“If a fluid which is denser than the surrounding water be poured in the instrument, and the magnetic connection be broken, *endosmose* still takes place; the dense liquor in the interior gradually rises in the tube. This phenomenon occurs equally with an organic membrane or a plate of clay, but does not with the sandstone or the carbonat or sulphate of lime. It is evident that this phenomenon of *endosmose* produced by the difference of density of the liquids, is an electric phenomenon as much as that produced by the pile. There are the same *active* and *inactive* solids, and they play the same part. The galvanometer however, does not indicate the existence of electricity in the two fluids. But as it is evident that the permeable solid has, in this instance, an action which is peculiar to it, and that it is indubitable that this action is electric, it follows that this action is entirely confined to the capillary canals of this solid; it is a capillary electricity. It is, in fact, known that ordinary electricity, when it passes through narrow channels filled with a fluid, gives a strong impulse to this liquid.

“There are fluids which, notwithstanding their greater density than water, do not produce *endosmose* when they are separated from this latter fluid by an organic membrane; such is sulphuric acid—the addition of this acid to a liquid susceptible of producing *endosmose*, destroys this property in the latter. Hence there are *active* and *inactive* liquids, as there is *active* and *inactive* solids. It is necessary to the phenomenon of *endosmose*, that the two heterogeneous liquids should be *active*, and the permeable solid also *active*—if one of these elements is *inactive*, *endosmose* does not take place.

"These discoveries may be applied in an evident manner to physiology, or to the physics of living bodies, in which there is a necessary co-existence of solids and fluids, eminently active, in which the solids *influenced* from their *sensibility* by the contact of the fluids, act on these latter, and give them an impulse. So in the preceding experiments, the *influenced* solids, from their activity by the contact of *active* liquids act on these latter, and give them an impulse. Experience teaches us the *solid influenced* is only the *solid capillo-electrified* by the contact of liquids; consequently the *organic sensibility* of living solids is only what I term *activity*, that is, the property of receiving *intracapillary electricity*. These experiments prove that this intracapillary electricity is in truth the agent of organic or vegetative life, they prove that the solids and liquids have one and the same fundamental vital property, which I term *activity*.

"This property in liquids consists in the power of giving rise to *capillo* electricity by their contact with solids. This property in solids consists in the faculty of receiving this intracapillary electricity. The destruction of this power in *active* liquids by the addition of an *inactive fluid*, may give some precise ideas on the mechanism of *stupifying poisons*. We perceive from these facts, the necessity of abandoning the use of the word *sensibility* in physiology; this term ought to be restricted to psychology!"

PATHOLOGY.

18. *Complete Retention of Fæces, for Six Months.*—"Mademoiselle J. B. aged twenty-four years, of low stature, and of a very delicate complexion, was unable at the time of her birth to pass the meconium. A midwife who examined her, thinking that there was a contraction of the lower part of the rectum, introduced a soap suppository without consulting any other person. During her childhood, the patient always found great difficulty of passing the fæces. Various remedies were administered without success; but when the catamenia appeared the bowels began to act naturally. They continued in this state for about two years; the patient improved in health, and she considered herself completely relieved from her old infirmity. But at this period the malady again returned, and Dr. Thune, of Drôme, was called upon to give his advice respecting her case. Dr. Thune found that she had a considerable tumefaction of the abdomen, the more prominent parts being just to the left of the umbilicus; she had an acute pain in this part, which extended towards the epigastric region. As the patient would not submit to be examined, and as Dr. Thune was ignorant of what had occurred in her infancy, he was unable to discover the true nature of her affection. He suspected, however, that there was a contraction of the rectum, and a medical friend of his, whose counsel he asked, being of the same opinion, they proposed a vegetable regimen, emollient fomentations, semicupium, and purgative lavements. The catamenia being suppressed, leeches were applied to the vulva. But these remedies, which produced momentary ease, were afterwards quite inefficacious. With a view to overcome this obstinate constipation, which had continued for six months without permitting the patient to have an evacuation, an ounce of castor oil was administered in a small quantity of liquid. She had scarcely swallowed this when she was seized with a violent colic, vomiting, hiccup, and other symptoms of misery. She died after eight days of inexpressible suffering.

"*Sectio Cadaveris.*—The abdomen was found very hard and enormously distended. An incision was made along the linea alba; but scarcely was this commenced below the sternum when it ran on of its own accord, accompanied by a noise like the explosion of a fire-arm. The intestines, being no longer supported by the abdominal muscles, gave way, and a considerable quantity of faecal matter was discharged with great force. The liver adhered to the arch of the colon. The stomach and the small intestines were empty and injected,

The large intestine was three *décimètres* and twenty *millimètres* in circumference, and it contained about thirty or forty pounds of substance resembling dry dirt. The rectum was thickened and inflamed. Its cavity was obstructed about three inches from the anus, by a sort of transverse partition, in the middle of which was an aperture scarcely large enough to admit the extremity of the little finger.

“Had cathartics been administered by the mouth in this case, and a rectum bougie used, the patient would, in all probability, have recovered and done well. What was done amounted to nothing. It was evident enough, from the symptoms of the case, that there was a mechanical obstruction in some part of the intestinal canal.”—*Lond. Med. and Surg. Journ. August, 1828, from the Ephemerides Med. de Montpellier.*

19. *Hydatids in the Female Breast, resembling a Scirrhus Tumour.*—“A robust young female, twenty-five years of age, complained of pains in the left breast, which at first had been confined to one point, but had subsequently extended, and became intensely severe. A hard tumour, of a shining appearance, about the size of a hen’s egg, was found in the part. It was divided into several lobes, and resembled a deep-seated scirrhus. The precise nature of it, however, could hardly be determined, from the immense size of the breast. Various means were ineffectually tried to discuss the swelling, and, as the sufferings of the patient were intolerable, an operation was determined upon. The mammary gland was perfectly healthy, but beneath the pectoral muscle a cavity was discovered, filled with round bodies as white as snow. They were found to be hydatids; three of which were about the size of a nut, and seven much smaller. Most of them escaped freely through the wound. They were of a spherical form, and covered with a shining solid membrane of a white colour. The parietes of the cavity in which they had been contained were smooth, and resembled a serous membrane. To promote adhesive inflammation, lint was introduced into the wound. For a long time an ichorous fluid was discharged, and stimulating injections of nitric acid and mercury were found necessary to produce adhesion of the parts. The patient was cured in about two months from the operation.”—*Lond. Med. and Phys. Journ. August, 1828, from the Clinique des Hopitaux.*

20. *Remarkable Predisposition to Hæmorrhage.*—DR. SCHREYER, of Vogtsberg, states that in a family of five children, under his observation, the eldest bit his tongue, and bled to death; the second and fourth are perfectly healthy, but the third and fifth have a remarkable tendency to hæmorrhage. All these are of the male sex. The two above mentioned, one aged five years and the other fifteen months, have, at irregular periods, blue spots on the legs and thighs, which increase till they become as large as a pigeons egg, when they assume a greenish blue colour, they do not bleed unless they are punctured; but if this be done, the hæmorrhage does not cease till the child faints, and the body is blanched. The blood which flows first is red, but after a time it becomes pale, like water in which flesh has been washed. Pressure with the point of the finger, kept up for twenty-four hours, is sufficient, according to the testimony of the parents to stop the bleeding. No coagulum ever forms, to plug up the vessels. Neither of the parents nor their relatives, participate in this morbid condition, and it is remarkable that it has affected their children alternately, viz. the first, third, and fifth.—*Zeitschr. für Natur. und Heilkunde.*

21. *Spasmodic Stricture of the Urethra from Mental Excitement.*—“We extract the following case from the inaugural thesis of Dr. Reimoneng, of Montpellier. A young man, after violent mental agitation, was attacked with retention of urine.

“Dr. R. found the bladder much distended; the hypogastric region was extremely tender to the touch, and the patient almost in a state of delirium from his sufferings. Several unsuccessful attempts were made to introduce an instru-

ment into the bladder. The contraction was sensibly felt in the passage, but appeared to be elastic, and to recede from the instrument without being permeated by it. In the endeavour to introduce the catheter a good deal of hæmorrhage was caused. After much violent straining, the patient succeeded in making about a wine-glassful of urine, and was momentarily relieved. Twenty ounces of blood were taken away, and thirty leeches applied to the perinæum. Clysters, fomentations, and a warm bath, were also employed. Still, however, the urine did not pass. Upon more accurate examination the contraction was found to exist at about six inches from the orifice, but no instrument would pass. The patient urgently requested to have some opium, for the purpose of relieving his torment, and a grain was given him. In the night he made water in abundance, and a bougie, of a large size, could afterwards be introduced. He stated, that the same accident had happened to him two years before, and from the same cause—mental excitement. He was then enabled to make water by the use of a warm bath, in which he remained two hours.”—*London Medical Gazette*, Vol. I. No. 26.

22. *Habitual Hæmorrhage from the Mammæ*.—S. A. æt. twenty-four, was admitted into the Königsberg Hospital for this affection. Had been frequently attacked by epistaxis during her infancy; was married at the age of fourteen, the menstrual discharge not appearing until a year afterwards. At sixteen she became pregnant, the menses occurring at the regular interval during the two first months: they then ceased, but reappeared in the sixth and seventh months. She suckled her child, (a boy,) for two years, the menses appearing, and continuing to recur, from the second month after her delivery. On weaning her child, milk continued to be secreted in large quantity; and although, when the breasts became tense, it flowed from the nipple, yet for her own comfort and relief, from the distress it occasioned, she took the child of a neighbour, and continued to suckle it for a year and a half, and occasionally gave the breast to other children, the quantity of milk secreted was so great. She had now got to a period of four years after her confinement, when a practitioner, who was consulted, undertook to stop the excessive and continued secretion of milk, by repeated abstractions of blood, and this was performed seven times in the course of eight days. The flow of milk upon this ceased, but a more serious evil now took place: blood was discharged from both breasts, attended with much pain, and this became almost intolerable when the blood ceased to flow. This state had continued ever since, the blood coming away continually night and day, and also during the menstrual periods, but without affecting her health.

On her admission into the Königsberg hospital, the patient had the appearance of a healthy well-fed woman, in rude health, with something of a plethoric habit, and, with the exception of the affection for which she was admitted, and the attendant pain, in perfect health. The mammæ, which she stated to have been very large and full whilst the milk was secreted, but to have lost half their size since blood had been discharged, felt soft, and showed no evidence of inflammation. They were, however, extremely sensible to the touch, and she could not bear the pressure of her clothes upon them. From the nipples, which were of natural size and form, there trickled blood, sometimes of a bright red colour, sometimes thin, dark-coloured, passing rapidly into putrefaction, and the quantity of which varied from three drachms to an ounce in the twenty-four hours. The blood could not be pressed from the breast as the milk had been. In cold weather, especially, there was much pain in the breasts, and when the flow of blood stopped, the pains became intolerable, and extended to the neck and head, shoulders and arms. She was free from fever, pulse slow and soft, skin dry, evacuations from the bowels and kidneys natural. During the progress of the case, the menses had continued to appear at the regular periods of four weeks, until a short time before the patient's admission, when, for the first time, they did not show themselves; whereupon a vicarious discharge of blood, apparently both from the lungs and stomach, took place.

Dr. Jacobson had the patient ten weeks under his care, during which time various means were resorted to with a view to her relief. Leeches were repeatedly applied to the pudenda, and blood taken from the feet; digitalis, hydrocyanic acid, and alteratives given internally; the semicupium and pediluvia employed, and a suspensorium mammae applied. No alleviation was, however, obtained, and the difficulties of a cure seemed to be increased, from the circumstance of discharge of blood from the lungs and stomach on the third appearance of her menses, (which usually continued eight days,) during her stay in the house. Unfortunately the patient most obstinately refused following the remedial means ordered for her, and she was on this account obliged to be discharged, so that the ultimate event of the case has not been ascertained.—*Rust's Magazin*.

23. *Action of the Uterus from Sympathy*.—"Dr. PICHON lately attended a young woman during her first labour, which was unusually tedious and severe. Her mother, forty-eight years of age, who attended as the nurse, was much affected at the sufferings of the patient: she soon experienced sensations resembling uterine action, and, four or five hours after the labour, she perceived a sanguineous discharge from the vagina, which continued for several days, with occasional interruptions. She had not menstruated before for eight years. On the third day from the first appearance of the discharge, the breasts swelled, and became painful to the touch. A kind of milky fluid escaped from the nipples for five or six days; the uterine hæmorrhage then disappeared, the breasts assumed their natural state, and the lady subsequently experienced no inconvenience. Dr. Paillard has recently related a similar case to the Society of Practical Medicine at Paris."—*London Med. Gazette*, Vol. I. No. 18.

24. *Extraordinary Instances of Suppression and Retention of Urine*.—"In Hufeland's Journal for August, 1827, there is an extraordinary case related of a young lad, who made no water for seven weeks, and who suffered little or no inconvenience from this extraordinary suppression. There was no vicarious secretion in this case. Catheters were introduced into the bladder, but no urine could be found. Dr. Racum, (of Riga,) after failing with all other medicines, restored the urinary secretion by a mixture of oil of amber, Venice turpentine, and balsam copaiva.

"In another German Journal, there is a case of retention quite as extraordinary. The patient was a young lad of thirteen years of age, who experienced a severe paroxysm of fever, in October, 1822, followed by a miliary eruption, which was repelled by exposure to cold. Another paroxysm ensued, and great debility was the result. On the 20th of November, he was seized with violent pain in the rectum, which was greatly aggravated by attempts to pass any fecal matters. In the beginning of January following, the constipation still continuing, the urinary secretion became extremely scanty, and at length ceased for fifteen days. This cessation, and for a similar space of time recurred twice afterwards. In March, 1823, the urinary discharge ceased again, and none was passed for six months afterwards! In July, the boy was found to be extremely emaciated, the bowels being obstinately constipated, and there being periodical pains in the loins, which were so severe as to throw him into convulsions. Nothing unusual could be discovered about the urinary passage, or rectum. The abdomen, however, was greatly distended, but not apparently with fluid, as it emitted a hollow sound when struck. On exploring the rectum there was felt, on each side, an elastic tumour, the nature of which could not be ascertained. Dr. Berres introduced a very fine catheter, the urethra being extremely contracted, but could not draw off any urine. Medicines only exasperated his sufferings. He was taken by his father to Pest, where he was examined by several physicians and surgeons. While there, the water commenced flowing in large quantities—the abdomen shrunk in proportion—and the boy got well."—*Med. Chirurg. Rev. July*, 1828.

25. *Inflammation of the Placenta.*—"On this subject M. Brachet has published a paper in a recent Number of the *Journal Général*, which we shall here notice. M. B. remarks that this inflammation is equally dangerous to the mother and the fetus. By intercepting or deranging the placental circulation, it may destroy the latter quickly or lead to abortion. Where the phlogosis is not so extensive or intense as to destroy the life of the embryo, it may greatly injure its health and obstruct development, by diminishing, more or less, the nutritive materials supplied by the mother. This inflammation is dangerous to the parent, because it may spread to the uterus, which is a serious consequence. Even in the induction of abortion, it is not devoid of danger to the mother. The causes of this placental inflammation are, blows on the abdomen, falls, shocks, violent contortions of the body, frights, strong mental emotions, &c. Inflammatory affections of the mother, and especially metritis, may also lead to placental inflammation. If, after the application of one or more of these causes, we find a pregnant woman complain of pains in the loins, coming on periodically, but never entirely ceasing, leaving in the intervals a dull and uneasy sensation, we may presume that there is placental inflammation in existence. In such case, abortion is imminent—or, if this do not take place, the life of the fetus is in danger. We cannot be too early in our endeavours to remedy the evil; and as, in all other inflammations of parenchymatous structures, blood-letting is the most effectual measure. But timid depletion will not succeed. The patient should be kept in the horizontal position, and a large quantity of blood should be detracted. To quietude, position, and venesection, cold drink should be added. But it is not sufficient to remove the more urgent symptoms. Antiphlogistic measures should be continued, till all sense of weight, pain, or uneasiness, is removed from the loins or uterine region, in order that induration of the placenta, the consequence of chronic inflammation, may not succeed the acute form, and thus produce those troublesome adhesions of the placenta to the uterus, which require manual force for separation after delivery.

"Dr. Brachet has no doubt that many morbid conditions of the placenta escape our notice, in consequence of the little attention that is paid to the examination of this part after its removal from the uterus."—*Ibid.*

26. *Morbid Softening of the Uterus.* By S. G. LECROIX, M. D.—"It is only of late years that mollescence, or morbid softening of the living structures, was discovered to be one of the most important, and, unfortunately, one of the most common structural lesions to which the human frame is subject. The brain, the lungs, the spinal marrow, the nerves, the muscles, the bone, the heart, and other parts, have been found in this pathological condition, and have been the subjects of accurate investigation. The uterus is the organ to which we are now to direct our attention.

"The mollescence of the womb is more frequently partial than general. It more commonly occupies the internal surface, and the cervix—though occasionally it is found penetrating through the entire substance of the organ. The mollescence presents several *degrees*, blending insensibly into each other. In the first degree, the parts are simply softened or very flaccid, generally with serous, or sero-sanguineous infiltration into the interstices. An example of this kind was observed by our author in the Hospice de la Maternité, in the month of March, 1827. A young and strong female had been carried off by puerperal fever, a few days after delivery. On dissection, not only the uterus, which had a large empty bag, but all the other organs, especially those of a muscular structure, as the heart, were in a state of extreme flaccidity. The tissue of the uterus was infiltrated with serosity, and very lacerable. Internally it was lined with a dark coloured, viscid coating, exhaling a putrid odour. The ovaria were softened, flaccid, and infiltrated. The heart was in a similar condition. There are not wanting examples of this kind in works on puerperal fever.

"In the second degree, the structure of the uterus is still farther altered. It will scarcely bear handling, without reduction into a pulraceous mass. The

following is an example, observed at the Hôpital de la Maternité, under the care of Professor Deneux.

"A female, aged twenty-seven years, of good constitution, and previously healthy, was safely delivered of her second child, 4th April, 1827, after a labour of seven hours. She complained of a pain in her side the same day, and was bled, both generally and locally; but some symptoms of pulmonic affection continued till the 17th of the same month, when she complained, for the first time, of burning heat in her throat. The night was passed in great agitation, and, on the following day, the tongue was observed to be swelled, and an erysipelatous eruption covered the neck and shoulders. As there were some signs of gastric derangement, an emetic was prescribed, and an oily purgative. On the 19th, the patient complained of great general debility, but no local pain. Having exposed herself to cold by throwing off the bed-clothes, the erysipelas disappeared rather suddenly, and was succeeded by diarrhœa, urgent thirst, and cough. 22d. Cephalalgia was added. 23d and 24th. Showed symptoms of low fever; but without any pain or tenderness of the abdomen. She lingered till the 26th, when she expired, never having complained of pain in the abdomen or uterine region.

"*Dissection.* The arachnoid was opaque—many red points in the brain when sliced—no effusion in the ventricles. There was some yellowish serum on the thoracic cavities—lungs sound—heart flaccid. There was some yellowish effusion in the peritoneal cavity, but the peritoneum itself was healthy. The mucous membrane of the cæcum and colon was intensely inflamed—liver enlarged and softened—the uterus was so soft, that it would scarcely bear handling, especially in its anterior parietes.

"In two cases of puerperal fever, our author observed a similar mollescence of the uterus; and cases are quoted from Lippich and Nauman, showing the same condition.

"In the third degree of uterine mollescence, the disorganization amounts to almost a liquefaction or reduction of the viscus to an inorganic pulp. Generally, this state is only partial—life not continuing till the whole organ is so changed—especially in acute cases. For the most part, the stomach, heart, or other viscera, partake in these mollescences. The tissue thus softened, sometimes preserves its natural colour—at other times it is pale. The parietes of the uterus are more frequently in a state of atrophy than hypertrophy, when they are morbidly softened.

"The symptoms of this uterine mollescence are very vague, and but little known—especially those attendant on the invasion of the disease. A sense of weight, or constraint in the pelvis—dull pain in the hypogastrium, augmented by pressure—uterine hæmorrhage—suppression of the lochia, (if in the period of accouchement.)—febrile exacerbations, &c. are the usual accompaniments of this disease; together with a remarkable prostration of the mental and physical powers, and a presentiment on the part of the patient, that death will ensue. Our author thinks—and the conjecture is rational—that, if this disease be going on during utero-gestation, there will be slow and laborious parturition, with probability of a dead fœtus, uterine hæmorrhage, and other accidents attendant on bad labours. It is also not improbable, that mollescence of a portion of uterus may be very accessory to that dreadful occurrence, laceration of the organ. This last supposition, indeed, is nearly converted into a certainty, by the cases of ruptured uterus put upon record by various authors. The rupture of other organs also, as the heart and stomach, in cases of mollescence of these parietes, is favourable to this supposition.

"The progress of mollescence of the uterus, is sometimes acute, sometimes chronic. The duration, of course, is very various. It may continue for many years, if the affection be partial, and if nothing occurs to hurry forward the disease. Without being able to say any thing decisive as to its comparative frequency, our author thinks, that it is a malady by no means very rare. The proximate cause is doubtful—it is not always the same. The mollescence is

sometimes a primitive affection—sometimes the effect of other diseases, as of inflammation. In the first instance, it may be owing to a kind of defective nutrition—in short, it may be a kind of atrophy of the organ, unaccompanied by any super-irritation or excitation. There is little doubt, however, that this mode of production is infinitely more rare than that which results from inflammatory action in the part, acute or chronic. Our author is also of opinion, that there is another cause for this mollescence of the uterus—and that is, a putrid or depraved state of the blood itself. Many cases which occurred to him at the *Maternité*, are in support of this doctrine; but, at present, he declines entering farther on this path of investigation.

“The *prognosis* is unfavourable—but more or less so, according to the degree of intensity, and extent of the disease. The *diagnosis* is very difficult, and must be gathered, if possible, from the few symptoms already described. In most cases, the disease is only recognised after death. This, however, was the case in many other diseases, now well known by living indications, but formerly undistinguishable, from want of investigation. The same observations will apply, no doubt, to the treatment. It must be purely *symptomatical*—that is, the actual phenomena present must be attended to, and combated, if practicable. In some cases the disease, when situated about the os, or cervix uteri, can be recognised by manual examination. It is then for us to determine, by the existing symptoms, whether it is of an inflammatory nature, or the effect of atrophy—and act accordingly.”—*Ibid*, from the *Répertoire*.

27. *Gangrene of the lung terminating favourably*.—M. LAURENT communicated to the Royal Academy of Medicine, a case of this kind. A lady had experienced from youth several attacks of hæmoptisis. In a journey which she made to Versailles, in 1823, she was seized with acute pain in the right side of the chest, which yielded to the application of twenty-four leeches, but which still induced an indescribable uneasiness of two or three days' duration. On the 4th day, she was seized with a violent and convulsive cough, succeeded by an abundant expectoration of greenish matter mixed with a black substance, emitting a horrible gangrenous odour. This kind of expectoration continued a long time, and it was ten months before she perfectly recovered.—*Revue Médicale*.

28. *Instance of Obliteration of the Aorta opposite the Fourth Dorsal Vertebra*. By Professor MECKEL.—A peasant, aged thirty-five years, previously in good health, robust, and well-made, was, all at once, on the 18th January, seized with a sense of great debility, while carrying a sack of grain to market. He was carried to the hospital immediately. The symptoms of syncope and vertigo were dissipated in a few hours; to which succeeded gastric irritability, pain in the chest, total loss of appetite, bilious vomiting, the pulse remaining little altered. By the sixth day, the patient appeared to be completely cured—got up—and was walking about—but suddenly fell down dead.

Dissection.—On opening the thorax, the pericardium was observed to be filled with black blood, occasioned by rupture of the right auricle, which was softened in its structure. The aorta ascendens was found to be too much dilated for injection from that point—and, therefore, ligatures were thrown on the left subclavian and carotid arteries, while the tube was fixed in the arteria innominate. The injection was considered to be unsuccessful, and as the subject had been designed for a demonstration, it was thrown aside. On opening the abdomen, afterwards, the vessels were seen injected, as were those of the lower extremities down to the feet. The examination being prosecuted, they found the aorta, immediately below the arterial ligament, reduced to the size of a crow-quill, while a beautiful net-work of vessels was seen between the trunks, going off from the arch of the aorta, and the intercostals of the aorta descendens. The said intercostals were very much enlarged, and had produced grooves in the ribs. From this circumstance it was inferred, that the obliteration of the aorta was an affection of long standing, and could not possibly have dated from

the late attack of syncope, six days previously. The man must, therefore, have, not only survived the cause of the obliteration, whatever it was, but lived in good health for many years afterwards. On enquiry, all that could be learnt, was, that this man had been very often ill in his youth; but afterwards had grown up strong and muscular.—*Journal Complémentaire*.

29. *Case of Mollescence of the Coats of the Stomach.* By M. CHOMEL.—The following case is highly instructive, as showing the great disorganization that may exist in the stomach without its producing any considerable sympathetic disturbance in the system or febrile action. We especially recommend to the attention of our readers, the concluding remarks of the editor of the *Medico-Chirurgical Review*. It must be evident to every man of reflection and observation that *experience alone* is by no means a safe teacher; it but confirms fools in their folly, the wise only learn from it.

“*CASE.*—A married woman, aged twenty-two years, who had had one child, became troubled with a considerable menorrhagia in the beginning of the year 1827, at which period she was also exposed to several moral emotions of a distressing nature. Nevertheless she became pregnant, and experienced almost constant malaise—anorexia—thirst—tenderness at the epigastrium after eating—and, finally, vomiting of yellow and bitter matters. It was three days after the commencement of these more serious symptoms that she entered La Charité, viz. on the 24th May, 1827. The expression of the countenance was natural, as was the state of the skin and tongue—the pulse was scarcely quickened—thirst very moderate—epigastrium very tender on pressure, but the abdomen soft and indolent. Each day she had ten or twelve vomitings of bilious matters, with some streaks of blood—stools regular. Leeches were applied to the epigastrium, and fomentations, lavements, diluents, &c. were employed, but without success. The vomitings continued—the tenderness of the epigastrium increased—the tongue was sometimes red, or shining—sometimes natural. Opium, for a time, diminished the sickness, but ultimately failed. On the 24th June, the sickness suddenly ceased—and the epigastric pain vanished entirely. But debility and emaciation advanced, and she expired on the 9th July, no vomiting having occurred for a fortnight before dissolution.

“*Dissection.* On opening the abdomen, the stomach was found torn from the cardiac orifice to about the middle of its anterior surface; but without any extravasation into the abdomen. A great portion of the mucous membrane of this organ was completely destroyed; and some parts of the muscular and peritoneal coverings were so soft and thin as to be ruptured almost by handling them. There were only a few red patches in the mucous membrane of the intestines. The uterus contained a fetus of three months.

“*Remarks.* This was an extremely well-marked case of gastritis, (of the mucous membrane,) as far as pathology was concerned. But it is not a little remarkable that, while such a dreadful disorganization was going forward in a vital viscus, there should be so little febrile disturbance in the system. The pulse and skin scarcely evinced any deviation from a state of health, and the tongue was often natural. The cessation of the vomiting too, for a fortnight before death, was an occurrence not to be expected, according to the ideas which are formed from elementary instruction, and systematic descriptions of diseases. It is from clinical experience, and from faithful clinical reports, that the mind becomes stored with the knowledge of those almost infinite varieties presented in diseases, the want of which knowledge renders the practitioner liable to perpetual error in prognosis and diagnosis. The apparently dry details of a case of this kind are quite wearisome, if not disgusting to the young, and especially to the routine practitioner. But we can tell them, that a careful perusal of such cases is one of the best modes of disciplining the mind for receiving accurate impressions at the bed-side of sickness. There is a very prevalent idea among professional men, that *practice alone* makes the good and successful practitioner. We deny it—and this denial is grounded on more than

thirty years of careful observation, not only of diseases, but of men. In all that course of time we never knew a good and a successful practitioner who did not read and study as well as observe. It is usual for the lazy man of experience to quote John Hunter, as an example of great eminence, without reading. Not having known John Hunter, we cannot speak as to his *practical* talents; but the foregoing opinion is the result of what we have seen among our own acquaintances, which are not very few. It is fashionable to deride books and study; but, for our own parts we have no hesitation in affirming, that nine-tenths of our *practical* knowledge would never have been acquired, had it not been for that discipline which results from studying the practical observations of others. This sentiment from gray hairs may probably have some weight with those who think that every thing is to be gained by the *sight* of diseases, and little or nothing from *reflection* excited by reading. Not a day passes—not a day has passed for twenty years, that we have not seen the most outrageous errors committed by men who pride themselves on never consulting any thing but their own *experience*. Such men were born in darkness—live in darkness—and will die in darkness.”—*Medico-Chirurgical Rev. July, 1828, from the Revue Méd.*

30. *Case of Tumour of the Cerebellum.* By JOSEPH HOULTON, Esq.—In our original department will be found three cases illustrative of the pathology of the nervous system, the following case, related by Mr. Houlton in the *London Medical Repository and Review, for April, 1828*, is interesting as tending to the same point, as is also the case by Mr. Stanley in our department of physiology, Art. 7, p. 187.

“John Burlin, though of small stature, was a strong-looking lad, with light hair, eyes, and complexion; his usual employment was husbandry. He had been from childhood subject to occasional attacks of head-ache, but was nevertheless a thriving, active boy, until he arrived at the age of twelve; the head-ache became now more frequent and severe; sometimes, on waking in the morning, he would complain of considerable distress in the head, and whilst working in the fields, the pain would suddenly seize him, and oblige him to leave his employment.

“In November, 1819, when fourteen years of age, he became much worse; the pain was then attended by great prostration of strength and violent retchings. I was called in to see him on the 9th of December. I found him in bed, and he had just thrown up a quantity of greenish fluid from the stomach; he appeared rather comatose; his skin cool; his pulse feeble; he answered questions readily; he said he felt faint and cold; he had not, when I first saw him, much pain in the head, but said that he had, when the pain came on, ‘*such snaps and cracks in his head,*’ and he referred the seat of the pain to the forehead. His mother said that he had often requested her to apply her ear to his, that she might hear the noise in his head, and she had done so, and had ‘heard a noise there, like the singing of a tea-kettle just before it boils;’ but this was probably all imaginary. She said, she thought it ‘something very remarkable that he should be some days so bad that he appeared as if dying, and that the next day he should be apparently well. He would frequently say on his better days that he was quite ashamed that he had complained of being ill.’ When in pain, he usually placed his hand upon his forehead, and then upon the occiput. Holding the head down would bring on the pain; so would turning it suddenly; he carried it back, inclining to the left shoulder; which gave him the appearance of having a wry neck.

“His appetite was by no means impaired; the bowels were costive. I promoted a relaxation of the bowels with calomel and jalap, and gave him volatile alkali, in camphor julep, which he took with much satisfaction, saying it made him feel better. The calomel and jalap were occasionally repeated, and he was cupped and blistered.

“He died rather suddenly on the 26th December, for on the morning of that day, he did not appear worse than he had frequently been before; in the afternoon, his mother thought he did not seem sensible, for he threw his arms about,

and used very unusual gestures, and in about an hour after, she noticed that he was seized with convulsions, and soon died, apparently without pain.

"In dissecting the brain, several ounces of clear fluid were found in the ventricles; the septum lucidum was lacerated; the plexus choroides pale. In the left lobe of the cerebellum was found a globular substance, about the size of a large chesnut, weighing 3ivss.; externally, this tumour was very vascular; internally, it was uniformly pale, of a pimrose colour; in texture, it was tough, more particularly in the centre."

31. *Diseases of the Heart caused by Onanism.*—"Dr. KRIMER, of Aach, has lately published an interesting paper on this subject. Our own experience has furnished us with several opportunities of seeing cases of the kind he describes; and as the subject has not hitherto been particularly discussed, we shall give the leading points of his communication. Dr. K. is of opinion that diseases of the heart, which have increased so much within the last twenty years, do not always depend upon organic alteration, but are very frequently produced by the baneful and lamentably frequent practice of the vice of onanism. Head-aches, great anxiety, palpitations, faintness, an oppression and unusual sensibility in the epigastric region, are the first symptoms produced. They increase in severity in proportion as the subject gives way to the gratification of his unnatural propensity, and quickly diminish, or cease altogether, if he abandons it. To support his opinions, M. K. states many cases. He enumerates the following symptoms as pathognomonic of such affections of the heart; by an attention to which, the practitioner will be enabled to distinguish the train of symptoms from other diseases which are not unfrequently suspected.

"1. The hair loses its natural brilliancy, is remarkably dry, and frequently splits at the extremities. It falls off easily and in large quantities, especially from the fore part of the head. In persons affected with consumption, or organic disease of the heart, the hairs appear well nourished, and rarely fall off.

"2. The eyes are dull, downcast, frequently full of tears, and without expression, and deeply sunken in their orbits. The edges of the eyelids are reddish, and surrounded by a bluish tint. In phthisical patients, and those with organic disease of the heart, the eyes are brilliant, and always preserve their natural expression and vivacity. In young females, at the approach of menstruation, a blue circle is commonly observed around the eyes, but here also their brilliancy is undiminished.

"3. The patient appears very timid, and unwilling to look other people in the face.

"4. Periodical head-ache is common, extending from the occiput towards the forehead.

"5. The power of sight is diminished; the appetite is lost; the tongue is usually loaded. A slight cough, short and difficult respiration, are generally present; but still the patient can draw a deep inspiration.

"6. Pains in the stomach, with weight and pressure in the epigastric region. Patients with organic diseases of the heart have occasionally these symptoms, but in such cases, they are not accompanied by those above enumerated.

"7. A general feeling of lassitude, and feebleness of the limbs, with pains in the lower part of the back. We would add also, that pain and throbbing of the testicles, with uneasy sensations shooting up the spermatic cord, are frequently complained of.

"8. The perspiration has a dull and sweetish odour, similar to that of infants at the breast.

"9. If the vice of onanism be touched upon in conversation, the agitation and embarrassment of the patient invariably betray him.

"10. If the practice be continued, the mind is at length enfeebled, the patient is incapable of mental or bodily exertion, and sinks into a state of somnolency."—*Lond. Med. Gaz. Vol. I. No 19, from Hufeland's Journal.*

32. *Rupture of the Stomach, produced by Vomiting.*—J. N. WEEKES, Esq. relates, in the fourteenth volume of the *Medico-Chirurgical Transactions*, the following case. A man, æt. 34, had been subject to attacks of pain in his stomach for two years; these pains generally went off with vomiting. About Christmas he vomited a large quantity of blood, since which time his health has been much impaired, the attacks of pain and vomiting being more frequent. "On the evening of April 13th he was brought to St. Bartholomew's Hospital, suffering great pain, extending from the epigastrium over the whole abdomen. There was nausea, but neither tenderness nor tension of the abdomen; pulse frequent, tongue clean. He attributed these symptoms to having drank some shrub and water, having had a similar attack a week before, after indulgence in spirituous liquors. On the following day the pain was better; but at eleven at night he had another attack of excruciating pain—the abdominal muscles hard and contracted, but the belly not tender on pressure; pulse small and feeble. Sixty drops of laudanum were administered, and not giving relief, were repeated; still, however, without benefit, as the pain continued for about two hours, when he was seized with violent vomiting. The pain was now rather better, and the vomiting ceased; but the patient sank rapidly, and died at four o'clock in the morning.

"On opening the abdomen, the stomach was observed to be flaccid and empty, and its contents, which consisted of a large quantity of dark brown fluid, were effused into the peritoneal cavity, through a ragged opening situated on its anterior surface, and near the œsophageal orifice. The rupture extended from below the lesser arch of the stomach to near its cardiac extremity, and was about four inches in length. The three membranes were not torn equally, the rupture of the peritoneal extending an inch farther than that of the muscular or mucous coat. On the posterior surface of the stomach was a laceration, measuring three inches in length; and there were two or three small ones, from an inch to an inch and a half in length, at its great arch. These lacerations extended only through the peritoneal coat of the stomach, the muscular and mucous tunics remaining perfectly whole. The mucous membrane of the stomach was lined with a great deal of dark-coloured secretion, beneath which the membrane itself was of a deep red colour throughout; its texture was softened, and partially emphysematous; the stomach, in other respects, appeared healthy. The liver was pale and softened; the gall-bladder contained a calculus; the structure of the spleen was unusually soft; the other viscera were healthy.

"The remarkable features in this case are the extent of the rupture of the stomach, with so little disease of its coats, there being no thickening or ulceration at the part where it gave way."

Dr. Crampton,* Mr. Travers,† and Dr. Abercrombie,‡ have related cases of rupture of the stomach, but in them there was ulceration of the coats of that organ. Lallemand,§ has published a case in which, on dissection, the cavity of the peritoneum was found full of half-digested food; the anterior and middle part of the stomach was torn obliquely from its small towards its great curvature, to the extent of five inches. The edges of the rupture were thin, irregular, and presented no marks of disease. The three coats of the stomach were not torn to an equal extent, nor exactly in the same direction; the rupture of the peritoneal was larger than the muscular coat, and the mucous membrane was the least extensively lacerated. A mass of scirrhus, an inch and a half in extent, surrounded the pylorus. The other parts of the stomach were perfectly healthy.

* *Medico-chirurgical Transactions*, Vol. VIII.
 § *Dictionnaire des Sc. Med.* Art. Rupture.

† *Ibid.*

‡ *Ed. Med. and Surg. Journ.* for 1824.

MATERIA MEDICA.

33. *Pyroligneous Acid*.—M. SCHULTZ, of Kassan, recommends this acid as a very sure and prompt remedy for producing cicatrization of phagedenic ulcers of the feet.—*Journal de Chim. Méd.* April, 1828.

34. *On the Use in Fevers of the Sulphate of Quinine and of the Quinquina*.—M. Miguel made a report to the Royal Academy of Medicine on the 22d of April last, on a memoir of M. Vulpes, of Naples, on the use of the sulphate of quinine and quinquina in fevers. M. V. gives the preference to the sulphate of quinine in the treatment of intermittent fevers, sub-orbital neuralgia, dyspepsia, &c. whilst he prefers the quinquina in substance in fevers, formerly denominated putrid, which usually proceed from sedative miasmata exhaled from individuals crowded together in small and badly ventilated apartments.

M. V., a partisan of the Italian doctrine, distinguishes the fever, called jail or hospital fever, from contagious typhoid fevers, such as the petechial fever, the yellow fever, which, in the Italian system, are regarded as inflammatory, and he rests the opinion on the following fact. In March, 1825, there was so great a crowd of patients at the Maison d'Aversa, in Naples, that they were constrained to lodge them in a convent, which was unprepared for their reception. The filthiest among them, who were the most numerous, were shut up in a confined dormitory, which was in a remarkably dirty state. Very speedily a fever made its appearance, which was at first looked upon as petechial, and treated antiphlogistically. The disease made rapid progress, and became very fatal. The sulphate of quinine was then employed, which aggravated all the symptoms. The quinquina in substance was next used, and with the happiest effect: it was administered to the amount of half an ounce daily.

M. V. offers the following explanation of the fact of quinine curing certain fevers, but not answering as a substitute for the bark in others. The operation of the bark, he says, is not anti-febrile but anti-periodical. It is of no service against fever, but acts in opposition to that unknown condition of the system which produces the periodical accessions. It is moreover tonic and corroborant. When fever is the result of inflammation, the bark can never be given with success, but if it be owing to a simple re-action of the system against deleterious agents which tend to weigh down the vital powers, the medicine should be administered in substance. In intermittents arising from marsh miasmata, and other analogous causes, the bark and its sulphate are equally applicable, the last being preferable, as less nauseous and more conveniently administered.

M. Vulpes strenuously combats the doctrine of fevers from this origin, depending upon internal phlegmasias, but admits that partial inflammations may take place during the course, and even from the effect of an intermittent fever. But he regards such inflammation as merely a symptom demanding local treatment, whilst the general state of the system demands the employment of tonics and specific remedies.

The reading of this report gave rise to a long discussion, in the course of which one member expressed his regret that M. Vulpes had not brought a single autopsy to support his positions. Other members reported experiments made with the sulphate of quinine administered in glysters, when its exhibition otherwise was prevented. M. Chomel stated that he had frequently given the sulphate of quinine in extremely large doses, to the amount even of sixty-two grains a day, without having observed either gastric inflammation or any of the unfavourable consequences usually attributed to this medicine.—*Revue Médicale*, May, 1828.

35. *New Preparation of Balsam of Copaiba*.—In consequence of the disgusting flavour of balsam of copaiba, and of the frequent adulterations of that valuable medicine, M. Dublanc, Jr. has employed the volatile oil in preference

to the balsam itself. This oil is very efficacious, whilst the resin is nearly inert. MM. Bard and Cuillierier have witnessed the success of this mode of administering the copaiba in thirty-three patients who were cured in five or six days.

M. Dublanc forms a spirit of copaiba by distilling the essential oil with two thirds of its weight of alcohol. (Sp. gr. 837.) This is nearly free from the unpleasant smell and flavour of the drug.

“M. Miathes states, that if bals. copaibæ be mixed with a seventeenth of its weight of pure magnesia, it will acquire a degree of solidity sufficient to allow it to be formed into pills.”—*Revue Médicale*.

36. *Oleum Ricini*.—M. LANGIER states that the repeated employment of this oil as a purgative, has twice produced on himself a pruriginous eruption, or redness and itching, at the wrists and bendings of the knees, yet the oil was neither rancid nor bitter.

37. *On Phosphorus as a Caustic*.—Dr. PAILLARD has lately written an interesting article on this subject. Reflecting on the rapidity with which phosphorus destroys the tissues to which it is applied, the doctor conceived the idea of employing it as a revulsive upon the skin, to remove chronic inflammations of the viscera, of the muscles, or joints. It is more convenient and quicker in its operation than moxa. A piece of phosphorus, about half the size of a lentil, placed on the skin and set fire to, produces great pain, canterizes deeply, and to as great an extent as an ordinary cotton moxa. Twenty seconds suffice for this operation. These new moxas may be made of all sizes; they can be applied in a greater or less number, one at a time, or all at once, according to the case in which they are employed. The author has applied twenty-four at once, upon the loins, for the cure of a lumbago that had resisted all ordinary means. In a case of neuralgia affecting the thigh and ham, Dr. Paillard placed thirty small moxas from the tuberosity of the ischium to the tendo achillis; they were all lighted at the same time, and extinguished in fifteen seconds, each producing an eschar as large as a *five-sous* piece. The patient, (who had not been able to get relief from cupping the whole extent of the limb,) was quickly cured. The phosphorus may be also employed to destroy a diseased tissue, or to change the character of a wound or ulcer. Dr. P. says, that he has cured a woman sixty-five years of age, who had suffered for eighteen months from a cancerous wart under the lobe of the left ear, of the size of a very small pea; upon which a piece of phosphorus of about twice that size was applied; an eschar covered the little tumour, which was detached in six days, and the patient speedily cured. This method is very useful in those timid patients who are alarmed by the preparations for the common moxa; for scarcely does this caustic begin to act before its operation is over, and yet it has as great an effect as that produced by the long-continued pain of the ordinary moxa, which becomes insupportable from the time it occupies.—*La Clinique*.

PRACTICE OF MEDICINE.

38. *Dysentery cured by Nitrate of Soda*.—M. MAYER states, that in an epidemic of dysentery which lately prevailed in Germany, he obtained great success with this remedy; the rate of mortality scarcely exceeding one in fifty. The method he adopted was to give from $\overline{3}$ ss. to $\overline{5}$ j. of the salt in eight ounces of gum water. It is added, that though analogous to common nitre, that this last has not the same effect when tried as a substitute for the other.—*Hufeland's Journal*.

39. M. JADELOT'S *Treatment of Croup*.—“M. Jadelot considers the croup as

a kind of angina of the air passage, presenting more violent symptoms, and having true paroxysms separated by well marked intermittents of special character. He admits different degrees in the disease according to its intensity, but without changing opinion as to its nature. Bleeding by leeches and emetics are the agents the most employed in the treatment of croup. The emetic alone has often sufficed to stop the disease, especially when it takes place in weak, pale, and bloated subjects; but in the opposite cases he insists on the application of leeches, and allows the blood to flow long enough for the infant to become pale, and the pulse to lose its strength. If the bleeding be too soon stopped there is a danger of not arresting the progress of the evil, and a result, which is at least troublesome, is, that of being obliged to apply more leeches.

"After the bleeding, M. Jadelot causes vomiting, several times in succession, at intervals of two or three hours, and the practice is attended by the greatest success, for the children find themselves relieved each time that they have vomited.

"When the croup has arrived at the second period without having been opposed, and the presence of a false membrane is suspected, M. Jadelot directs leeches to be applied, but from the moment that they fall off he hastens to produce vomiting, and it is in this case that he employs by spoonfuls, every ten minutes or quarter of an hour, the mixture called *anti-croupal*,* until he has obtained vomiting. He insists equally upon derivatives used upon the skin or in the intestinal canal; he advises also to provoke sneezing.

"When the disease is very rapid, it has been a question whether we ought to commence by bleeding or emetic. M. Jadelot's opinion is, that we should bleed first if the infant be robust, and if it present signs of congestion towards the superior parts; on the contrary, he would commence by vomiting, when the subject is pale and exhausted, and there is little heat and fever."—*Ratier's Medical Guide to Paris*.

40. *Case of Gout.* By M. MESTIVIER.—"Gouty affections conceal themselves under so many different forms, that it is often very difficult for the most experienced physician to follow them through all their modifications. M. Mestivier has had the advantage of many years' practice in a country where gout is almost endemic, and the following case he adduces as a very curious one:—

"The Prince of Wagram, upwards of sixty years of age, of a bilious and sanguineous temperament, strong constitution, had for a long time been subject, as autumn came on, to attacks of gout, which increased in violence after each attack. The seat of the disease generally was in the feet. The year preceding the campaign of Moscow, the prince had the severest attack he had ever had: it was necessary to have recourse to bleeding to reduce the inflammatory action: this had the effect, and the attack gradually declined, and went away in fifteen or twenty days.

"In the campaign of 1812, the prince, from the pressure of circumstances, was exposed to great fatigue, and obliged to use a great deal of exercise, and to this cause perhaps he owed an exemption from his usual attack. However, the privations he had suffered, and the influence of climate, visibly affected his health, and it was with some difficulty he reached Posen, where he was obliged to lay up in bed. M. Mestivier was called to see him, and found him suffering intensely: his face, and every part of the body, was of a deep yellow; his look sad and uneasy; lips dry and without colour; tongue a little moist, but covered with a thick yellow coating; great thirst; frequent hiccup on drinking; respiration short and oppressed; no cough or palpitations. The epigastric region, which the patient would not suffer to be touched, presented nothing particular, but within twenty-four hours it had become the seat of so acute a pain, that the weight even of the shirt was insupportable. This pain, which

* Anti-croupal Mixture.—R. Infus. Polygalæ, four ounces—Syr. Ipæacuaninæ, one drachm—Oxymel Scillæ, three drachms—Antim. Tart. gr. jss. misc.

the patient compared to a tooth-ache, stretched over towards the right hypochondrium; the abdomen was soft to the feel, but sluggish in its action. For the last three days there had been no evacuation, although some gentle aperients had been used; the urine was scanty, red, and deposited a brick-coloured stuff, adhering to the vessel. Pulse was small, compressed, very quick, but regular.

"Taking all the symptoms into account, the case was considered as one of gall-stones passing through the biliary canals. Ol. Ricini, and a smart cathartic enema, were prescribed. The oil was rejected, but from the other means there was so copious an alvine discharge that the patient fainted. No advantage accrued from this; the case became serious, the danger augmenting every hour.

"It was now suspected that it might be a case of erratic gout, and warm irritating baths and sinapisms were ordered to the feet. He passed a sleepless night. The next day there was no amendment, and the patient was very low. A blister was applied to the epigastrium. Four hours after the application of the blister, the feet were examined: the left was reddened from the effects of the means used, but not in the least painful; the right, on the contrary, was much swollen, red, and excessively painful, and having a well characterised fit of gout. From this time the other and alarming symptoms gave way, and in a fortnight the Prince was completely recovered."—*London Med. and Phys. Journ.* August, 1828.

41. *Obstinate Hiccough cured by the Actual Cautery.*—"A woman, thirty-two years of age, of a very susceptible habit of body, and weak in health, who had menstruated irregularly, and suffered much mental anxiety, was suddenly attacked with violent and repeated hiccoughs. They usually ceased towards bedtime, but were always increased in violence if the patient attempted to perform any active duty. At the time she presented herself to M. Dupuytren, the paroxysms of hiccup were extremely violent. He determined to employ "les toniques les plus énergiques;" and the actual cautery was selected as that best adapted to procure relief. A red-hot iron, of an oval form, about an inch in diameter, was applied opposite the xiphoid cartilage, until the part was reddened, the skin only was destroyed, and, after several applications, the hiccups were permanently cured. About ten years ago, M. Dupuytren treated a similar case in the same manner with equal success."—*Journal Complémentaire*.

42. *On the Use of Mercury in Venereal Complaints.* By S. D. ВРОУНТОН, Esq.—Mr. Broughton, in an interesting paper published in the first volume of the *London Medical Gazette*, says, that he has "taken about *three hundred and fifty* recorded cases of ulcers of the penis, admitted and treated in the regimental hospital of the 2nd Life Guards, *one hundred and fifteen* of which appear to have used mercury in different forms and proportions, and for different periods of time; so that about *two hundred and thirty-five* cases of primary symptoms, following sexual intercourse, have been healed by other means than mercurial remedies, as well as many not in the list.

"The number of secondary cases of symptoms following the primary venereal disorder during the same period, amounts to about *twenty-two out of three hundred and fifty*. And, upon following up the narrative of these, it appears, that the majority were generally simple cases of *lichen*,* which got well with-

* The following case may serve as an example of these in a healthy constitution, wherein no morbid diathesis or casualty modifies the symptoms. E. M. a private soldier, was admitted, August 10, 1827, with a deep sore on one side of the glans penis, following recent connexion. He was put upon low diet, and saline aperients, and the sore dressed with lint, dipped in the *lotio nigra*. In three weeks the sore was completely healed. Three weeks afterwards, an eruption, (like *lichen*.) covered his body, without preceding fever. This was September 9. He took *sarsaparilla*, and on the 27th he was discharged to his duty perfectly cured. In some of these cases small doses of the oxy muriate of mercury have been combined with the *sarsaparilla*, when the case assumed a chronic form, and did not become quickly cured; but in most cases it was not used, and in none but in a very small degree,

out mercury, and in no long time. The greater part of those cases which were protracted, and attended with ulcers of the throat, pains of the limbs, nodes, &c. were originally treated with mercury in the hospital, and the rest showed that mercury had been clandestinely produced at some period or other during the progress of the complaints. The simple cases of lichen, &c. were chiefly found amongst the men *not* treated with mercury, *while the most protracted and troublesome cases occurred with those who had been fully subjected to its operation.** Since the use of mercurial saturation has been suspended, no cases have occurred to throw any distrust upon the propriety of the practice; and the few cases of secondary symptoms were generally mild and trifling compared with those which followed mercurial treatment, and readily yielded without mercury.

"I do not pretend to enter upon any nice discriminations of practice, or to draw a line between cases requiring and cases not requiring mercury, nor to describe such as mercury will aggravate. Indeed, I am aware of no satisfactory rules to guide the practitioner in this respect, but those which he himself derives from a sound judgment and experience. I wish merely to assist in establishing the fact, that venereal sores admit of treatment without mercury, and without cause of alarm; the secondary evils of mercury being usually far more destructive than those which arise from venereal taint, and that the one case is often mistaken for the other. Consequently, it appears to me, that there is more security in omitting to push a mercurial course than in adopting it; that comparatively few cases occur requiring mercury; that the perils of mercury are sometimes manifold and terrible; that at all times it entails more or less personal inconvenience and annoyance, and frequently leads to a train of ultimate symptoms, from which erroneous inferences are made, and an useless, if not mischievous practice adopted, the effects of which cannot be foreseen, and their limits no man can calculate upon.

"In my dispensary practice I have had frequent occasion to observe the great danger of pushing a course of mercury, when the patient is not under the surgeon's control, as to diet, temperature, &c. An error made in the treatment of sores on the penis with persons going about, and exposed to sudden changes of temperature, to cold winds, or wet, is too often irretrievable. The labouring classes in London, perhaps not living on the best diet, nor possessing sound constitutions, exhibit frightful examples of the imprudent use of mercury; the effects of which, from some cause or other best known to themselves, there are practitioners, (chiefly in private practice,) who are constantly disposed to attribute to syphilitic action and deficient mercurial saturation. This propensity, indeed, I remember once to have heard very satisfactorily accounted for in a medical debating society, by a candid avowal, that if the anti-mercurial mania continue to spread, '*it would be ruin to the apothecaries and general practitioners.*' Therefore, the inference drawn from this liberal sentiment was, that it is better to be on the safe side, and not to hazard the adoption of modern heretical opinions against the '*wisdom and experience of our ancestors.*'"

Mr. B. has given several interesting cases illustrative of his views, but our limits will not permit us to copy them. The following are the conclusions at which he has arrived:—

"1. That all the forms in which venereal complaints present themselves, are to be removed without the aid of mercury; and this is more especially and remarkably the case in regard to the secondary symptoms of the disease.

"2. That mercury has formerly been, and frequently is still, used in an unnecessary, indiscreet, and highly dangerous manner.

"3. That mercury, *judiciously and alteratively* used, is not only an excellent, but perhaps the best remedy in many venereal complaints; nevertheless, a title of the quantity anciently administered is generally sufficient, and more than sufficient, probably, to eradicate the primary symptoms; while, again, a title of

* And such I have always found to be the case elsewhere.

that tithe, or a centime, has been found competent to eradicate the secondary stage of the disease.

"4. That mercury is very far from being a certain preventive of the secondary train of symptoms in any form or quantity.

"5. That mercury, when pushed far, induces ulceration of the mucous secreting surfaces, more especially of the inner palate, throat, and fauces, as well as affections of the bones, so exactly resembling those ascribed to true syphilis, that the most experienced surgeon cannot detect any difference. In the hands of the members of the old school, mercury, in fact, creates its own work, by establishing diseases which have too often been confounded with venereal poison, and thereby led to a most dangerous and destructive practice.

"6. That the train of symptoms following mercurial treatment, has been found more severe and difficult to remove than that which follows primary venereal sores *not* treated with mercury; and that repeated relapses into secondary symptoms are removed with increased facility every time they occur, (as if the disease wore itself out,) in cases wherein no mercury has been given.

"7. That while mercury, through its *accumulative* power, is the best and most powerful *alterative* ever discovered in numerous inflammations—such as the iritic, the hepatic, the dysenteric, the rheumatic, &c.—and is singularly powerful against that resulting from venereal poison; yet, if given incautiously, it tends to undermine the healthy state of the constitution, to establish, in some instances, and in others to aggravate constitutional diseases—to increase constitutional irritability—to excite inflammation and ulceration in, and to destroy the mucous textures of the body—to promote morbid absorption and removal of the fatty, fibrinous, and osseous substances of the system—and to induce synovial, albuminous, and serous accumulations in the respective cavities lined with the membranes producing such secretions; although, in moderate doses, mercury tends to remove such accumulations.

"8. That the extent and injury to the soft and bony parts of the system, arising from the action of mercury, is far more dreadful than any primary or secondary effects of venereal poison.

"9. That mercury never was a *specific* against the venereal poison, for relapses were constantly occurring during its fullest operation; nor possessed any virtue in the cure of the disease beyond being the most powerful *alterative* in the hands of the medical practitioner; and that the creed so long believed in, (to the ruin of the health of multitudes through mercurial salivation,) of its indispensability towards the cure, and the destruction of the patient if omitted, is utterly false and groundless; facts which can admit of immediate every day demonstration in the many thousands of the healthiest British soldiers, *who have been easily, effectually, and permanently cured of every stage of the venereal disease, without ever having taken one particle of mercury.*

"The bigotted adherence to a belief so false, and so universal, in which the wisest and most philosophic of our profession blindly participated, will be quoted by after ages as a national reproach; and, as it has indeed already done, will, it is to be feared, go far in destroying our confidence in all medical dogmata, or even doctrines, whatever.

"10. That mercury is wholly inadmissible in cases of *sloughing* sores of the penis, wherein there is preceding high inflammation and tumefaction of the parts affected, attended with fever; as it aggravates the local symptoms, and increases constitutional irritation; *and that mercury is inadequate to the cure in such cases, specific contagion being superseded by violent inflammatory action*, which is too rapid in its course to be overtaken by the accumulative power of mercury, or by any remedies but *those which act immediately and directly upon the symptoms of danger.*"*

* It has occurred to the author to notice two distinct examples of destruction of the penis—in one case entirely, and in the other reducing it to a short stump—following the application of mercury to sloughing sores on the penis, consequent to inflammation and fever.

43. *Treatment of Syphilis without Mercury.*—M. FRICKE treats the venereal cases, which are admitted into the hospital at Hamburgh, in the following manner. “1mo. Every patient is bled to the amount of from six to twelve ounces, and the operation is repeated if necessary. About half a drachm of sulphate of magnesia is then given every three hours, and continued until repeated evacuations are produced. If the bowels afterwards become constipated, or the *ulcers heal slowly*, the use of the same remedy is renewed. 2do. As an external application to the chancres, Goulard water, or two grains of sulph. zinc, in six ounces of distilled water, is employed. When the size of the sore is much diminished, and it is no longer painful, lime water is used. If either of these lotions cause pain or inflammation, they are to be still farther diluted. Buboec are first treated by compression, and, if resolution cannot be promoted, they are opened with a bistoury, and afterwards dressed with dry lint. Condylomatous tumours are removed by the knife, or cauterized, and the wound dressed with the same lotion as for the chancres. 3tio. The patients are kept upon very low diet, consisting of vegetables, bread, and ‘soupe à l’eau,’ twice a day. 4to. If, at the end of a few days, the symptoms are not alleviated, a few doses of mercury, in small quantities, are given, and are found sufficient to effect a cure.

“The results obtained by this mode of practice are highly satisfactory. Chancres and buboes are speedily cured, and the cicatrices are by no means so evident as when mercury has been employed. Chancres, from three to four lines in diameter, are generally cured, in female patients, in from one to three weeks. Rather a longer time is required in male patients. M. Fricke, who has the advantage of retaining under his observation the patients thus treated, has not yet observed any secondary symptoms.”—*Graëfe und Walther's Journ. der Chirurgie.*

44. *Injurious Effects of Sulphuric Acid during Suckling.*—MR. THOMAS BEVAN, in a communication in the *London Medical Gazette*, Vol. I. No. 25, states that sulphuric acid given to mothers whilst suckling their infants, produces injurious effects upon the latter. “In a few days,” he says, “the bowels become much disordered, the motions very frequent and green in appearance, and, if we can judge by the restlessness of the little sufferer, passed with pain. If the acid be persevered in, the health of the child becomes most sensibly affected, and death at last closes the scene. I could mention a few cases which occurred under my notice, in which mothers, whilst suckling infants, were reduced to such a state of debility as to require the administration of gentle tonics, and in which cases the diluted sulphuric acid was selected and prescribed in doses of from gtts. v. to gtts. x. three or four times a day, in conjunction with infusion of roses. In nearly all the cases which fell under my observation, the mothers were much improved by the treatment, whilst the infants suffered in the manner before detailed. The probability most certainly appears to be, that the acid passes from mother to child in a free and uncombined state, and irritates the delicate mucous lining of the alimentary canal—so much so as to cause ulceration. My attention was first directed to this subject by a man who asked me ‘what I had given to his wife, as the child’s napkins, upon being washed, went into holes?’ I did not attribute the holes made in the napkins to the acid, but supposed they were produced by some other cause. In this case, the health of the mother was perceptibly improved.”

45. *Case of Anasarca, Successfully Treated.* By DR. JÜGER.—The subject of this case, says the doctor, is an old man of sixty-five years, of a feeble and cachectic habit, very much addicted to spirituous potations, exposed to hard labour in the open air, and burthened with cares and privations. This man, after having been affected during the spring of 1824, with wandering rheumatic pains, for which he was treated by sudorific draughts, was suddenly seized with general anasarca, in the month of August of the same year. He could scarcely walk, his respiration was short and difficult, his debility had increased, and a febrile exacerbation manifested itself every evening. The urine was sometimes

abundant, whilst at others it was nearly suppressed, the skin at the same time remaining dry. Not being able to succeed in exciting the activity of the skin by internal means, such as the tartar emetic, the acetate of ammonia, the arnica, sambuca, &c. means which were particularly called for in consequence of the rheumatic affection to which the anasarca had succeeded, recourse was had to frictions with the tartar emetic pomatum. This was first rubbed over the abdomen, then the inferior extremities, until these parts were covered with pustules, and this treatment was continued, care being taken to renew the excitement of the integuments by new frictions, so that the effect of the old should not be lost. At the same time tonics and diaphoretics were administered internally. In consequence of these means the secretion of urine became more active, whilst abundant stools and profuse perspiration succeeded. Very soon the quantity of urine surpassed that of the drinks. The œdematous distention now diminished gradually, at first in the legs, next in the abdomen, and in about four weeks all the parts which had been the seats of disease were restored to their natural size. The pustules produced by the stibiated pomatum, discharged most copiously a purulent matter. To complete the treatment, Dr. J. administered the following pills: R. sulf. stib. aurant. gr. x.—aloes ʒiss.—pulv. scill.—pulv. herb. digital. purp. āā gr. xv.—crem. tart. ʒij.—extract. card. bened. q. s. ut ft. pil. pil. No. 100. P. d. 5 p. m. et vesp. After the patient had taken two hundred of these pills he was perfectly cured, and had recovered sufficient strength to enable him to walk several hours. The patient remains well at the end of two years.—*Journal des Progrès, &c. Vol. IX. from Graefe's Journal.*

46. *Ptyalism.*—Dr. ELLIOTSON is in the habit of employing a gargle of chloride of soda in ptyalism, and always with speedy relief.—*London Medical Gazette, Vol. I. No. 25.*

47. *Purpura Hæmorrhagica treated by Venesection.*—A man thirty-seven years of age, was admitted into St. Bartholomew's Hospital, under Dr. LATHAM, "having every part of the body sprinkled over with purpurous spots—the gums livid, spongy, and oozing blood—the whole tongue livid, and half of it presenting the appearance of a 'large, black, bleeding fungus' shooting from its surface, the inner surface of the cheeks presenting similar phenomena. The countenance was sallow—the eyes tinged with bile—blood, and nothing but blood, passing by stool. Yet the patient felt strong—had an appetite greater than natural—the urine was free from blood, and the body exhaled a fetid odour. Under these circumstances Dr. Latham had him bled to fifteen ounces—the blood exhibiting a prodigious buffy coat. He was kept on water gruel—had a few doses of aperient medicine containing calomel or the hydrargyrus cum creta, under which treatment, the purpura and hæmorrhage gradually subsided, and the patient recovered. During convalescence he required active purgation, and the use of brisk purgatives to check the inflammatory diathesis and obviate constipation of the bowels."—*Medico-Chirur. Review, July, 1828.*

48. *Chronic Ulcerations of the Tongue and Pharynx, cured by Iodine.*—M. MAJENDIE reports in the *Journal de Physiologie*, two cases of old ulcerations of the tongue and pharynx, considered as incurable, which yielded to the iodine given in large doses. The first case was that of a female of lymphatic temperament, who had enjoyed good health till the age of thirty, when menstruation became irregular, and epileptiform attacks supervened. After a time ulcers broke out on various parts of the body and limbs: "some exfoliations of the tibiæ and bones of the arm also took place. Excrescences were now seen on the pharynx and tongue, and the attendant physician, conceiving the complaint to be syphilitic, notwithstanding the positive denial of the woman, she was put upon a mercurial course. Under this treatment the ulcerations of the body and limbs healed; but those of the tongue increased. In the course of time the patient lost her voice, which was attributed to ulceration of the chordæ vocales. In

this deplorable condition, M. Majendie ordered a solution of the hydriodate of potash to be exhibited, and the dose to be gradually increased, till it amounted to thirty-six drops in the day. The good effects were soon conspicuous. The surface of the ulcerations cleaned, and, in fifteen days, those of the tongue were completely healed. In a little more than a month, the other ulcers were also cicatrized. When every thing appeared to promise success a violent dyspnoea came on, and all the symptoms usually attendant on œdema of the glottis. Antiphlogistics failed, and tracheotomy was not practised. The patient sank. On examination, the interior of the larynx was found covered with firm and whitish excrescences, ('vegetations,') by which the passage was rendered impervious to the air."

"CASE II. A female, aged forty-one years, had been in the Hôpital Saint Louis four years previously for large ulcerations on the legs. She had scarcely left the hospital, apparently cured, when she was seized with dyspnoea, pain in the region of the larynx, and complete loss of voice. These symptoms continued, and, at the same time, large ulcers broke out on the face and neck, as well as on the tongue. Various modes of treatment had been put in practice, but without much relief, and she entered the Infirmary of the Salpêtrière, in March 1827, three years after the commencement of the facial ulcerations. Her nose was now almost demolished—various fungus ulcers were spread over the face and tongue—deglutition was very difficult—the respiration was impeded—articulation almost annihilated. On the 27th June the patient was put on the use of tincture of iodine, and the dose was gradually increased. The ulcerations at last were entirely healed, and a complete cure is now effected."

OPHTHALMOLOGY.

49. M. DUPUYTREN'S *Treatment of Spots on the Cornea*.—"The patients have flocked to the Hôtel Dieu for some years for the treatment of spots on the cornea, as formerly under Desault, for that of chronic ophthalmia of a scrofulous or other nature.

"The treatment employed by M. Dupuytren is as follows:—

"A bleeding if there be violent irritation. Leeches to the temples if this irritation is less. Afterwards, one or two mild purgatives, two or three days intervening between each. After which a seton made of cotton threads, united in a cylinder, and some inches in extent, under the skin at the back of the neck.

"In fine, the insufflation, or blowing into the eye or eyes, with the barrel of a quill, the eyelids being separated, a pinch of an impalpable powder, composed of R. Oxyd. Zinci. impur.—Sacchari Crystal.—Hydrargyri Submuriatis $\bar{a}\bar{a}$ partes æquales.—Misce fit Pulv. subtilissim.

"The size of the pinch may vary, and the insufflation should be repeated night and morning. The patients ought neither to wash nor dry their eyes after it.

"When there is no disease on the eyelids, no inflammation, no irritation of the conjunctiva, the insufflation of the above powder generally suffices to remove the spots. Those which are recent and slight are completely dissipated in a few weeks by this treatment. The thicker and larger patches are ordinarily cured in a month or six weeks, and very frequently patches which occupy nearly the whole of the cornea, and completely cover the pupil, entirely intercepting the passage of light into the eye, disappear entirely in a few months."—*Ratier's Medical Guide to Paris*.

50. *Foreign Bodies in the Puncta Lachrymalia*.—M. DEMOURS has communicated to the section of surgery two cases, in which foreign bodies have found their way into the puncta lachrymalia, producing great irritation and pain. In

the first, the foreign body was an eye-lash, in the second, a portion of a beard of barley, about two lines long. They were easily extracted with forceps.—*Journal Général*, June, 1828.

51. *Affection of the Eye produced by Lightning*.—"J. H. ætat. 11, was repeating her lesson in the school-room of St. Martin's parochial school, on the afternoon of the 6th of May, standing with her left side towards the window: when a storm came on, and a flash of lightning strongly lit up the room, which instantaneously produced loss of sight of the left eye, with a tingling pain in the eye-ball of the little patient. The pain increasing during the following days, Mr. Mayo was sent for, by whose advice leeches were repeatedly applied to the temples, and blisters behind the ear and to the back of the neck, and mercury given so as to affect the mouth. Under this treatment there was daily a perceptible progress towards recovery; the condition of the patient at different periods being as follows:—

"The symptoms of the 11th of May, consisted in a painful sense of heat in the eye-ball; tenderness of the eye-ball on pressure; inability to raise the eye-lid; and, when the eye-lids were held open, extreme sensibility to light; vision dark and almost extinct; no redness of the conjunctiva; no inflammation of the sclerotica or iris; no loss of transparency of the humours; pain and tightness across the forehead; a sense of throbbing in the head; tongue white; pulse frequent.

"About the 20th of May she could distinguish objects more easily, and could bear to look towards the light, when the eye-lids were held apart: the muscle which raises the upper eye-lid might at this time have been supposed to be paralyzed, as she could bear to look upon the light; but was wholly unable by a voluntary effort to open the eye-lids.

On the 24th of May she was able to raise the eye-lid at pleasure, but the consent between the muscles of the two eyes was found altered in the following remarkable manner. When both eyes were closed she could open either at pleasure, but not both at once; on the attempt to open the second the first became closed, or if held open the eye was observed to roll away, being drawn upwards and outwards. This morbid association was easily broken by a simple artifice.

"On the 27th, all the symptoms being much alleviated, the left eye to external appearance sound, and used habitually with the other, yet vision with that eye being in some degree painful and weaker than before, the nature of her sight was carefully examined; when it appeared, that although she could read ordinary print, if held near to the eye, and stoop and pick up a pin thrown upon the ground, (yet not as readily as when using the right eye,) she had totally lost the faculty of distinguishing colours. Thus she was able to point out the circular spots on a yellow silk handkerchief, spotted with scarlet, but described the spots as black, and the ground as somewhat less black; white paper she described as a shade of black, and the leaves and petals of a rose as a deeper shade.

"On the 28th, the following day, she had recovered the power of distinguishing colours, but her sight remained weak, objects being seen darker and less distinct than natural with the left eye. At present, though not perfectly recovered, her sight daily improves."—*London Medical Gazette*, Vol. II. No. 28.

52. *Cauterization of the Cornea for Idiopathic Paralysis of the Iris*. By M. SERRES.—M. Demours, on behalf of a committee, made a report to the Royal Academy of Medicine, on an essay of M. Serres, physician at Uzès, "On the Cauterization of the Cornea, for correcting, in a prompt and sure manner, Alterations of Sight with Dilated Pupils." M. S. proposes to treat idiopathic paralysis of the iris, without affection of the retina and optic nerve, by applying nitrate of silver to the cornea near its junction with the sclerotica. Four cases are given by him, and the committee of the Academy having employed this re-

medy in three cases, testify to its efficacy. The caustic should be applied for one second, and it is useful that some lachrymation should be excited, and also a slight injection of the vessels of the conjunctiva. The light cloud which appears on the cornea, disappears in a few days.—*Archives Générales*, June, 1828.

53. *Cataract with Amaurosis, Successfully Treated.*—M. DEMOURS communicated to the Royal Academy of Medicine, at their sitting of the 26th of June last, that he had operated successfully for cataract on a person who had also amaurosis of the eye operated upon, and that the latter affection was subsequently cured.—*Archives Générales*, July, 1828.

54. *Fistula Lachrymalis cured by the Extraction of a Stony concretion.*—A woman, æt. thirty-two, of a cachectic constitution, had been affected for nine months with fistula lachrymalis. Dr. KRIMEN, on examination, found the lachrymal sac swelled, hard, and upon the most prominent part of the tumour, which was red and painful, a small ulcer which penetrated into the lachrymal sac, and discharged pus, mixed with the tears, especially on pressure. The nasal canal appeared entirely obliterated, for the finest sound could not be introduced a line within it. When Dr. K. in order to re-establish the canal, endeavoured to introduce a pointed sound, he withdrew on its extremity a strong concretion of the size of a small pea, the removal of which left the canal entirely free, and the fistula was promptly cured. The small calculus was ash gray, covered with thick mucus, polished, of a calcareous appearance, and insoluble in water, alcohol, and weak vinegar. Dr. K. thinks that it was formed in the lachrymal sac, by inspissated mucus.—*Journal des Progrès*, Vol. X. from the *Journal Von Graëfe und Wallher*, &c. 10 B. S. 597.

SURGERY.

55. *Extirpation of a Cancerous Excrescence from the Margin of the Anus.*—Pelat, aged twenty-three, of a good constitution, came from the venereal ward, where he had been treated for syphilis with corrosive sublimate. An excrescence of an extraordinary size grew on the margin of the anus; it had a cauliflower aspect, and it covered the orifice of the anus entirely; it had the texture of a fibrous tissue converted into carcinoma, and it emitted an odour peculiar to cancer. The expulsion of the fæces was difficult and painful. The patient was very desirous of having the tumour removed. Professor Lallemand thought that the syphilitic virus had been subdued by the sublimate, but that there remained a new product, which could only be removed by an operation.

August 17th, 1827, M. Lallemand excised the tumour by means of a pair of crooked scissors, cutting round the verge of the anus gradually, and cauterizing the part as he went on. The operation lasted rather long, but the excrescence was ultimately entirely removed without the occurrence of any hæmorrhage. On dissecting the tumour, its tissue presented cancerous characters in many points.

A piece of lint was introduced into the rectum, and spread over the surface of the wound. Compresses, introduced one after the other, were applied to prevent internal hæmorrhage. A certain quantity of lint, and a T-bandage completed the dressing.

The patient did well; no unpleasant symptoms appeared, and he left the hospital on the 3d of September perfectly cured.—*Clinique de l'Hôtel Dieu de Montpellier*.

56. *Case of Dislocation of the Metatarsus.* By Mr. SANDWITH.—“Sir Astley Cooper observes ‘the metatarsal bones I have never known luxated; their union with each other, and irregular connexion with the tarsus, prevent it, and if it ever happens it must be a very rare occurrence.’ (p. 355.)

"This accident, however, happened in my own person, from a blow on the foot, my horse falling upon it. I was instantly sensible of the nature of the injury, and as soon as I was upon my feet, the metatarsus was found to be drawn upwards, and obliquely outward upon the tarsus, by the action of the flexor muscles. On the removal of the boot, which was cut away, these were the appearances:—the foot considerably shortened, the toes turned a little outward, and a hard swelling bigger than an egg upon the tarsus, with tumefaction of the integuments. The pain, which was great at first, was kept under by a warm fomentation.

"The reduction was easily effected by my friends Messrs. Williams and Brereton, and leeches and bread and water poultices prevented inflammation. For several nights the foot was violently shaken by spasmodic action of the muscles, but the parts preserved their relative situation; and although it was nearly a year before all lameness ceased, yet at the end of six weeks I was enabled to lay aside my crutches. For the ability to use the foot in so short a time, I was indebted to a contrivance which rendered the foot and ankle inflexible.

"Instead of an elastic sole to the shoe-part of the apparatus, one of wood was procured, around the heel of which was nailed a piece of firm unbending leather: this reached as high as the calf of the leg; three small straps with buckles held the leg in situ, and a broader one across the instep secured the foot. The comfort I experienced from this simple apparatus is my reason for describing it so particularly; it has since been found useful in various injuries of the foot and ankle."—*London Medical Gazette*, Vol. I. No. 21, 1828.

57. M. DUPUYTREN'S *Treatment of Phagedenic and Corroding Herpes*.—

"There is no physician who has not had an opportunity of observing and treating phagedenic or corroding herpes, and experienced a disagreeable proof of the inefficacy of the anti-herpetic, anti-scorfulous, anti-venereal remedies, and others which have been tried by turns against this cruel disease, according to its different appearances, and its supposed nature. We know, that in spite of all the remedies, the phagedenic herpes eats and destroys the nose, the lips, the cheeks, the eyelids, the ears, the temples; parts which it more especially and frequently attacks. Fire itself seems to irritate, as well as arsenical paste; these agents have besides the inconvenience of destroying the parts on which they are applied, and to add to their deformity. These motives have for a long time induced M. Dupuytren to seek other remedies against phagedenic herpes, and it seems certain, that they may be cured without deformity, by the use of the following powder:—

“R.	Hydrarg. Submur. præcip. partes	-	-	-	199
	Oxidi. Arsenici. Albi. vel	} partem	-	-	1
	Acidi. Arseniosi.		-	-	-
					<hr/> 200

"This remedy, which acts rather as a specific than as a caustic, may be variously employed. If the surface of the herpes is ulcerated, moist and cleaned, it is powdered with a little puff, charged with the above described powder, so as to cover it with a thick layer of about the twentieth part of an inch. If this surface is covered with a scab, it must be thrown off by means of a poultice, and then it is dusted as has been just described. In fine, if the herpes is actually covered with an imperfect cicatrice, it must be destroyed; twenty-four hours after, the surface is dusted, when it must necessarily have ceased bleeding."—*Medical Guide to Paris*.

58. *Ligature on the Common Carotid Arteries*. By Professor LANGENBECK.—

"A bronchocele, supposed by Professor Langenbeck to be of a rare variety, which he denominates aneurismatic bronchocele, furnished an indication for a

ligature on the superior thyroideal artery. He commenced by tying that of the right side; but on the eleventh day after the operation, hæmorrhage came on, which was so profuse that Professor Langenbeck found it necessary to apply a ligature to the common carotid of both sides. The patient died on the following day.

"On examination of the body, the right hemisphere of the brain was found resting on a bed of exuded matter; the vessels were not unusually full on this side; but they were so on the left side, where no exudation existed. The internal surface of the carotid was found inflamed from its origin all the way to the brain. The author thinks that a ligature on the thyroideal artery is of no great practical utility, especially as the disease for which such an operation is indicated is extremely rare, and as the operation can only be incomplete; for the inferior thyroid must always dilate when the upper is obstructed; the size of the bronchiocele diminishes but little; and a ligature on the common carotid, should it become requisite, as in the present case, is not without danger. Every one who has witnessed this operation will agree with Professor Langenbeck in this opinion. It has seldom proved of much service, and it perhaps has never succeeded in curing the bronchiocele."—*Lond. Med. and Surg. Journ. August, 1828, from Neue Biblioth. für die Chirurg. u. Ophth.*

59. *Application of Plates of Lead to Wounds.*—M. REVEILLE-PAÏSE has recently adduced a number of cases, showing the advantages of this treatment of wounds. It has been tried at the Hotel Royale des Invalides, in extensive wounds, both recent and those of long existence, and M. le Baron Yvan, chief surgeon of that hospital thinks highly of this mode of treatment. The first trials, he says, were made on large chronic ulcers, of disgusting aspect, abundant suppuration, foul bottom, callous edges, and in most a tendency to erysipelas to some distance. The first day of the application the pain diminished, the suppuration was changed, inflammation yielded, and the edges in diminishing also contracted the surface of the wound. Extremities, which were covered with thick crusts, as in elephantiasis, were also wrapped up in lamina of lead, these scabs, which had resisted the means habitually employed, fell off. The same means have been employed in the wounds caused by hospital gangrene: the ash-coloured bottom disappeared at the first dressing, the suppuration became healthy, and cicatrization took place. The application of lamina of lead to wounds, diminished the pain, thinned the borders, resisted the tendency to erysipelas, modified the suppuration, and procured solid cicatrices."—*Journal des Progrès, Vol. IX. 1828.*

60. *Fracture into the Knee-joint, Successfully Treated.*—"March 24th. A. Aldred, a sailor, about forty years of age, fell from the top of a wagon, and broke his leg: he was brought to St. George's Hospital in two hours after, when it was found that the head of the tibia was broken off just above the insertion of the ligamentum patellæ, and the part separated was itself divided into two portions; the fibula was safe. There was a good deal of swelling, and blood appeared to be effused into the limb. This state continued to increase, and next day the leg was prodigiously swollen, with much pain, particularly about the knee.—He was twice bled, had leeches applied, and was purged; the limb was placed upon a double inclined plane, and a cold lotion constantly applied to it.

"Under this treatment the symptoms gradually abated, and on the 1st of May the use of the fracture-box was discontinued, and the limb bandaged; in a week more the bandage was left off, there being only some thickening about the joint, with stiffness."—*Lond. Med. and Phys. Journ. June, 1828.*

61. *Amputation of the Neck of the Uterus.*—This operation is now frequently resorted to in Europe in cancerous affections of this viscera, which have been formerly regarded as incurable. However formidable it may at first appear, the danger attending it seems to be comparatively inconsiderable. Marjolin, Ré-

camier, Sauter, together with several English and German surgeons, have even gone further, and removed the uterus entirely. Almost all these operations, apparently so impracticable, have been crowned with unexpected success. Lisfranc has amputated the neck of the womb thirty-six times, and lost but three of his patients, a small proportion if we take into consideration that some of the cases doubtless presented unfavourable circumstances. Many of the women thus operated upon, have since been happily delivered of living children. The experience of those who have engaged in these operations shows that wounds of the uterus cicatrize very readily, and demonstrate besides, that the excision of the cancerous part is almost always attended by a radical cure.

For the purpose of obviating many inconveniences attending the usual mode of operating, M. Colombat has proposed an instrument of his own invention, a drawing and full description of which, with the proper mode of employing it, may be found in the *Revue Médicale Française et Étrangère*, for May, 1828. By means of the *hystérotome*, as he calls it, the neck of the uterus may be seized in the vagina, and cut with ease at a single blow, a *speculum uteri*, having been previously introduced. "The trials I have made," says M. Colombat, "in the presence of celebrated professors of the faculty, of many distinguished surgeons of the capital, and of a great number of students, have sufficiently proved that the operation performed according to my plan, is not only more prompt and less painful, but that it offers the precious advantage of not requiring such superior skill as the method pursued by Dupuytren, Lisfranc, and Hutin."

62. *Amputation of half the Lower Jaw for Sarcoma, successfully performed.* By M. LISFRANC.—"P. F. V. æt. forty-seven, of sanguineous temperament, and good constitution, entered the Hospice de Perfectionnement, Nov. 9th, 1827, with a sarcomatous tumour, about the size of two large eggs, extending from the left ramus of the inferior maxillary bone, to the symphysis. The gums were affected with a cancerous ulcer, the discharge from which was sanious, and extremely fetid; the lymphatic glands beneath the jaw on the affected side, were considerably enlarged, the integuments entire. Seven months previous to his admission, the patient first noticed a small tumour connected with the bone, about the size of a common pea; this gradually increased, attended with continued lancinating pains, and obstructing both articulation and mastication. M. Lisfranc, prior to the performance of any operation, made a trial of antiphlogistic measures, which dispersed the enlargement of the lymphatic glands, but had no effect whatever, either on the size of the tumour or the lancinating pains experienced in it. Accordingly, on the 26th of November, the disease was removed by the knife in the following manner:—

"An incision was begun in the centre of the lower lip, and carried perpendicularly downwards to the lower margin of inferior maxillary bone, quite through the soft parts covering it. In consequence of the volume of the tumour, it was found necessary to prolong this incision an inch lower down, from which point the knife was continued transversely, as far as within a quarter of an inch below and before the angle of the jaw. The fingers of an assistant had been previously placed on the 'origin' of the carotids to mark their situation, and from the lower border of the chin to the angle of the jaw, the incision was merely carried through the skin and cellular membrane. The dissection of the soft parts from the surface of the tumour was extremely painful, but the flap having been formed, two teeth were extracted, the bone was divided across the ramus by a fine saw with extraordinary facility, and then the symphysis by a common saw; the operator seized the upper part of the tumour with his three middle fingers, the lower with his thumb, and then, by means of slight force, was able to draw down the jaw, and separate it from a great quantity of the tissues attached to it behind. The tumour was found to extend deeply beneath the tongue, and required a very cautious dissection to remove it. The maxillary arteries were not wounded, indeed no vessel of any consequence, so that *not a single ligature nor cautery was applied!*

"Three hours after the patient had been placed in bed, M. Lisfranc drew together the lips of the perpendicular incision by the interrupted suture, but did not attempt to unite the transverse portion of the wound, in order that liquids might flow readily. On the 31st, the perpendicular portion had united, and the lower was freely suppurating. On the 15th December, the patient could speak with facility, and was allowed solid food. Saliva continued to flow through the lower wound, and compression was made upon its edges, but it caused too much pain, and was discontinued. M. Lisfranc then placed in the mouth a small sponge to absorb the liquids, and in the course of a few days the wound had entirely cicatrized. The patient was kept in the hospital a month after this, and then departed for the country, the distortion of the jaw being very slight, indeed the deformity was scarcely apparent on wearing a cravat. The patient could articulate distinctly.

"In the remarks upon the case, M. Lisfranc details the appearances observed in patients who have died some time after amputation of greater or lesser quantities of the lower jaw. If the portion removed be small, and taken from the median line, the portions are little removed from each other, and unite like a common fracture. 2do. When the ends of bone remain at a certain distance asunder, a very solid fibrous substance like that which unites a badly set patella, is found to intervene between them, and prove a considerable check upon their motion. 3tio. In cases when the union between the ends of bone is firm, nothing particular happens to the temporo-maxillary articulation, but when, from the action of the muscles, the inferior extremity of the bone is carried inwards, luxation, partial or complete, of the condyle of jaw from the articulating cavity is the consequence."—*Med. Chirurg. Rev. July, 1828, from the Revue Médicale, March, 1828.*

63. *Gun-shot Wound of the Forehead, in which the Ball remained for a long period in the Skull.*—"Baron LARREX lately presented to the Royal Academy of Surgery, the cranium of a soldier, who died of phthisis a few weeks previously. This man received a musket bullet in the forehead, a little above the left eye, in the battle of Waterloo. He fell senseless on the ground, and there he remained, without any assistance, for the space of forty-eight hours. He was then discovered to be alive, and carried to the hospital at Brussels. Various efforts were made to extract the ball, but without success. It appeared to be lodged in the bone, half within and half without the cranium. There were evident symptoms of compression, including paralysis of the right side of the body. Bleeding and the antiphlogistic regimen were rigidly enforced; in process of time the symptoms were mitigated, and he so far recovered as to be sent to Paris. There he got so well as to resume his military duties, and died at last of phthisis, the ball still lodged in the cranium. The only phenomenon that remained, as a consequence of the wound, was the loss of memory in respect to proper names and the names of nouns substantive. The ball is still seen lodged in the bone, partly within and partly without the cranium. The inner table of the skull had evidently been fractured into several pieces."—*Medico-Chirurgical Review, for July, 1828.*

64. *Strangulated Hernia.*—Several of the French journals have spoken favourably of the introduction into the urethra of bougies, medicated with narcotics, as facilitating the reduction of strangulated hernias.

In the *Repertorio di Med. Torino, for December, 1826*, there is related the case of a man æt. fifty-two, afflicted with inguinal hernia, who was admitted into the hospital, and the usual means having failed in producing a reduction of the strangulated intestine, Professor Riberi introduced into the urethra a bougie smeared with extract of opium; in a few minutes the pulse became feeble, the skin pale, &c. the professor was enabled to reduce the hernia.

In the *Observatore Med. di Napoli, for 1827*, there is recorded the case of a woman, æt. fifty, who had been afflicted for many years with hernia, which be-

came strangulated. Leeches to the anus, emollient cataplasms to the tumour, &c. were employed without relief. Dr. Magliari thinking that the operation might be deferred till the next day, suspended all other means, and ordered an ointment composed of ten grains of extract of belladonna, and half an ounce of lard to be applied to the tumour. The next day the tumour was found to have diminished, and the hernia was in a short time entirely reduced.

65. *Lithotrity*.—Dr. CIVIALE presented to the Royal Academy of Sciences a memoir on the results of his mode of operating during 1827, of which the following is the abstract. Of fifty-four supposed calculous patients, thirty were operated on with the lithotripter, of whom twenty-five were cured, and five still under treatment; in the remaining twenty-four, no stones were found. Among those cured, was a boy of seven years of age, in three operations of ten minutes each. Among the patients treated by Dr. Civiale, several had undergone the lateral operation two, three, four, five, and six times.—*Bulletin des Sciences Médicales*, May, 1828.

66. *Lithotrity*.—The commission named by the Academy of Sciences of Paris to award the prizes on medicine and surgery, established by M. MONTROX, decreed five thousand francs to Baron HEURTELoup for the improvement he has made in lithotriptors, and a medal of one thousand francs value to Dr. GRUTHUISEN as the first to propose the plan of breaking down the stone in the bladder. We make the following extract from their report:—After detailing the objections to this mode of operating, they state that Baron Heurteloup has overcome most of the difficulties. He does not dilate the urethra before the introduction of the instrument. The machine for seizing the stone is composed of four branches which open widely without, and are thus capable of embracing a much larger stone than those before in use. After the stone is seized, the instrument has no motion, being fixed firmly by means of a plate of iron to the bedstead. The mode of seizing the stone is a great improvement; it is well known that when the bladder contracts it presses the stone strongly against its neck, occasioning violent pain. M. Heurteloup has taken advantage of this circumstance, the branches of his instrument opening and being applied against the sides of the neck of the bladder, he permits this organ to empty itself of the water or urine with which it was distended, and hence the calculus is forced between the branches of the instrument, and thus seized without pain or fatigue to the patient.

When once secured, it is broken down at a single operation, by being scooped out till the shell is so thin that it may be crushed by the pressure of the branches. Whilst this part of the operation is performing, all fragments are washed out by means of a double current of water thrown through the instrument. Those fragments which are too large to pass, are afterwards broken by a machine he calls *brisecoque*, which reduces them to powder in a short time. In fact, the plan of Dr. Heurteloup is the most certain, rapid, and safe, and by far the least painful.—*Idem*, June, 1828.

67. *Cancer of the Uterus cured by Injections with Hydrocyanic Acid*.—Dr. BRUNI reported to the Medico-Physical Society of Florence at their sitting of the 9th of March, 1828, the case of a female affected with cancer of the uterus, which had advanced to the last stage, and presented all the symptoms which announced the approach of death. Wishing to try the hydrocyanic acid prepared according to Scheele's process, he dissolved four grains, (denari,) in four pounds of barley water, with which he had injections made into the vagina four times a day, whilst he gave aloes and cicuta internally. At first the injections produced smarting and violent pains; but the patient, after a few days, passed from the vulva some fragments of a membranous and fleshy substance, and the pains immediately commenced abating; she gained strength and flesh, and in five months no sign of disease of the uterus remained, and the menses became regular.

It would be fortunate indeed, if further experience should confirm the conclusions to which this single case would lead. But without being sanguine of such a result, at least the remedy might be worth trying.

68. *Abscess in the cavity of the Meninges, cured by the Application of the Trephine.* By M. Roux.—A boy, aged fifteen, had, for more than four years, a small fistulous opening in the left parietal region, in consequence of the opening of an abscess of the scalp caused by a blow. M. Roux having been consulted, thought that there existed caries of the internal table, and that coma, which occurred when the pus did not flow freely, was owing to the accumulation of pus from this caries. He applied the crown of a trephine upon the fistula, with the intention of facilitating the passage of the portions of caries, or necrosed bone; he then found that caries did not exist; the fistula penetrated the dura mater. This membrane was incised, and he found that there existed an abscess in the cavity of the meninges, which compressed the brain. When the pus was evacuated, he perceived a considerable depression on the middle of the left lobe, but this depression gradually diminished, and finally disappeared. The wound made by the trephine gradually healed, and the patient was cured.—*Journal Général de Médecine, April, 1828.*

69. *Extirpation of a Cancerous Tumour from the Axilla.* By Professor LALLEMAND.—“A shoemaker, aged thirty, of a lymphatico-nervous temperament, and of a weak constitution, born of healthy parents, entered the Hôtel-Dieu, under the care of Professor Lallemand, on the 11th of October, 1827. He had always enjoyed good health until February, 1827, when he felt a severe pain in the whole of the right superior extremity, with a difficulty of moving the member. A tumour of the size of a nut appeared soon after in the right axilla. Emollient cataplasms were applied to it, but it did not diminish in size; on the contrary, it rapidly increased in volume, and the pain in it became lancinating. A fragment of caustic potass applied to it made an opening, which gave issue to pus, and the tumour appeared to reduce a little, but the skin began to change. The patient went to the hospital of Lyon, where he used injections of chloruret of lime, and had a portion of the skin removed. When he entered the hospital of Montpellier he was in the following state: his general functions went on regularly; he was very lean, and felt slight shiverings at intervals. A tumour of the size of an orange occupied the arm-pit, and extended from the fifth or sixth true rib up to the clavicle; a great part of it was uncovered by skin; the skin covering the rest of the tumour was loose and everted, of a red colour. This gave M. Lallemand an opportunity to examine the state of the parts. By introducing his forefinger, he found that the tumour extended high up, but that the cellular tissue uniting it to the neighbouring parts was loose, and that it was thus quite isolated. Having discovered the nature of the tumour, M. Lallemand set about removing it on the 8th of October. He made an incision of the skin along the anterior boundary of the axilla just to below the clavicle, and divided successively the two pectoral muscles, which were very vascular. The vessels were secured immediately after being divided. When the division of the great pectoral was made, there occurred hæmorrhage, accompanied by a noise like that of a tap when turned open. It was supposed at the moment, owing to the force of the hæmorrhage and the noise which attended it, that the axillary artery had been divided; but it was soon discovered that the blood came from the acromial artery, or *thoracica humeraria*, which was very voluminous, and which arose very near the origin of the axillary artery. The tumour was then detached anteriorly from the surface of the pectoral muscles. This part of the operation was rather difficult and protracted. M. Lallemand at last arrived at the axillary artery; he dissected very carefully round this vessel, and applied a ligature loosely round it, close to the clavicle, in case it should be injured in further proceedings. One part of the tumour was situated before, and another behind, the axillary plexus; and the deepest part extended be-

tween the subscapulary and great serratus muscles. The plexus was dissected as if it had been for an anatomical demonstration. The tumour was entirely detached; two small glandular bodies of a suspicious character, which still remained, were removed.

"The wound having been dried, three points of suture were used, and the parts were brought into perfect contact. The arm-pit was filled with lint, which were secured by compresses and a bandage. The tumour was of a lardaceous texture, soft in many parts. The patient recovered, without any untoward accident: the wound had completely cicatrized on the thirty-third day after the operation."—*London Medical and Surgical Journal, August 1828, from the Clinique de l'Hotel Dieu de Montpellier.*

70. *Amputation of the thigh at the Hip joint.*—M. DELPECH, professor at Montpellier, communicated to the section of surgery, two cases, in which he performed amputation of the thigh at the hip joint, with success. The operations were performed at the Hospital Saint Eloi of Montpellier. The first case was that of a young man who had necrosis of the femur, with numerous fistulous openings; the second was a man with comminuted fracture of the thigh, and considerable abdominal disorder; the extremity of the inferior fragment passed considerably above the extremity of the superior, and a considerable mass of flesh was interposed between the fragments; the usual attempts were made to effect a coaptation and consolidation of the fragments, but in vain. M. D. commenced the operations by tying the femoral artery, he made a single flap, (at the internal side of the thigh,) closed the wound with sutures, and effected a union by the first intention.

M. Larrey agrees with M. D. in the general principles of the operation, but he prefers making two flaps, an internal and an external one. M. Roux is of opinion, that each of these plans may possess advantages in different cases.—*Journal Général de Médecine, June, 1828.*

71. *Staphyloraphy.*—During eight years, since M. Roux has resorted to this operation, forty individuals have submitted to it. In nineteen, the division did not extend beyond the soft palate; six only have not been cured. In the remaining twenty-one, the congenital division extended to the arch of the palate; of these, nine have been cured by the operation, and the remainder have been placed in a condition to wear an artificial palate.—*Idem, April, 1828.*

MIDWIFERY.

72. *Case of Rupture of the Uterus, and of the Safe Delivery of the Woman by the Cæsarian Section.* By Dr. LUDWIG FRANK.—In our third number, p. 222, we adduced some cases of ruptured uterus, terminating favourably, with a view of controverting the opinion of Dr. Hunter, that in such cases, any attempt to relieve the woman was cruel. The following case furnishes additional testimony to the same effect. A woman, æt. 44, a native of Parma, and the mother of five children, was taken in labour of her sixth child at the beginning of the ninth month of pregnancy, August the 9th, 1817. A midwife was called, who afforded her the necessary help; but as the patient was standing up, she was suddenly seized with vomiting and faintness, and was therefore immediately conveyed to bed by the midwife and attendants. At the instant she was laid on the bed, she felt something give way in the abdomen, and then, to use her own expression, it appeared to her as if there were two children in the womb. Under these circumstances, a surgeon was sent for, who recommended to her rest, as he conceived the sensations of the woman arose from the motions of the fœtus during the act of vomiting. But the midwife, finding that the abdomen was more and more distended, that the vomiting continued, and

the breathing was difficult and interrupted, sent for Dr. Joseph Rossi, professor of midwifery. Professor Rossi, on a minute examination, decided that the uterus was ruptured; and after consulting with his father, Dr. Francis Rossi, and other practitioners in the town, he, in common with his colleagues, decided that the Casarean operation was absolutely indicated in the present case. The operation was performed two hours after the rupture of the uterus is supposed to have taken place, by Professor Cecconi, in the presence of the two Drs. Rossi, Professor Pizetti, and others. The incision was made on the left side of the abdomen, just in the spot where the feet of the child could be felt. After the incision was made, the feet immediately presented themselves to view; and the living child, together with the placenta, were then removed. Forty days after the operation, the patient was perfectly restored, and able to walk out. Her menses some time after this appeared; and in the space of three years from this period, the same woman was delivered of a seven month's child, which lived fourteen days. Over the spot where the incision was made in the abdomen, a cicatrix of the size of an apple remained, which, although it could never be completely healed, caused the patient very little inconvenience.

Two cases similar to the above occurred to M. Lambron, in Orleans. In the one case he performed the operation eighteen hours, and in the second, two hours after the rupture of the uterus.—*Vide Art. Rupture de l'Uterus, in the Dict. des Sc. Méd. Vol. XLIX. p. 255.—Sulzburger Medic. Zeitung. Feb. 1825.*

73. *Expulsion of the Placenta, Four Months after Delivery.*—A woman was delivered in January of a dead child, in which putrefaction had commenced in different parts of the body. The midwife made many useless efforts to extract the placenta; she pulled so hard indeed by the funis as to break it off. The placenta still remained in the uterus. The cervix uteri closed, and neither uterine pains nor any discharge indicated the probability of the expulsion of the after-birth. The woman enjoyed a perfect state of health till the following May. Slight pains and a sanguineous discharge then appeared. These symptoms lasted but a short time, and again returned. They were now more severe, and were followed by the expulsion of the placenta, the presence of which in the uterus, during so long a period, had been productive of no inconvenience.—*Gemeins deutsche Zeitschr. für. Geburtskunde.*

74. *Pregnancy, with Cancer of the Cervix Uteri.*—Dr. LAUBREIS, a practitioner in Bavaria, has related two cases of this nature: the first proves that conception may take place, if the full term of utero-gestation be completed, notwithstanding the presence of carcinoma of the neck of the uterus, provided it be not far advanced. In the second case, the schirrous was far in the ulcerative stage before impregnation took place, and the woman miscarried at the end of the third month, and died, by which an opportunity was afforded of examining the parts.—*Bulletin des Sc. Méd. March, 1828, from Journal für Geburtshülfe, &c. Tom. VII. 1827.*

75. *Detachment of the Placenta by injection of the Funis.*—In our third Number, page 223, we noticed this method of detaching the placenta, and laid before our readers the evidence that could at that time be collected with regard to its utility. Since that period the practice has attracted considerable attention and as far as we can learn, has been found useful. In *Rust's Magazine* a case is related by Dr. Hoffman, in which, after the delivery of the child the placenta remained adherent, the os uteri contracted, the uterus and abdomen enlarged, while the paleness, faintness and loss of pulse indicated internal hemorrhage. The injection of some warm water and spirits, was in one minute followed by the contraction of the uterus and subsequently by the expulsion of the placenta. The patient recovered rapidly.—*Vide Journal des Progrès, Vol. IX.*

Two cases are recorded in the *Nouvelle Bibliothèque Médicale*, for April last, by M. Duparque, in which this means was employed with success.

In January last M. Legras presented to the Medical Society of Paris, a long memoir on this subject, illustrated by cases, which was very favourably reported on by a committee consisting of MM. DUCRÉTEAU, CHAILLY, and GENDRIN. The committee close their report with the following observations. "The author, (M. Legras,) has endeavoured to restrict himself to actual experience, and he appears to us to have demonstrated by facts the safety in all cases, of injections into the vessels of the chord after the birth of the infant, their efficiency in causing a separation of the placenta, in arresting hæmorrhage from a partial detachment of this body, and finally in stimulating the uterus in cases of inertia of this organ. The views we have taken, and the experiments we have reported conduct also to this important practical fact, that the effect of the injections can be regulated by graduating the temperature and quantity of the fluid injected, by rendering it more or less styptic, and by augmenting at pleasure the impulse by which it is thrown into the vessels. If a few ounces of fresh water be adequate for the separation of the placenta in ordinary cases, it would be imprudent to trust to this quantity in dangerous hæmorrhages from partial detachment of the placenta with absolute inertia of the uterus. In such cases we should rapidly fill and distend the placental vessels, so that the cold and styptic fluid should be driven even to the uterine surface by thus forcing it to exude from the placenta." The memoir and report are published in the *April No. of the Journal Général de Médecine*.

MEDICAL JURISPRUDENCE.

76. *Sulphuric Acid detected in the Fœtus of a Woman who poisoned herself with Sulphuric Acid.*—A woman, at the last period of pregnancy, poisoned herself with concentrated sulphuric acid. She kept it secret until the moment of her death. The last efforts of nature were exerted to give birth to the child. Upon examination of the body of the infant, sulphuric acid was detected in the cavity of the pleura and peritoneum, and also in the heart and bladder. Its presence was also ascertained in the liquor amnii.—*Gemeins deutsche Zeits. &c.*

77. *Poisoning by Sulphuric Acid.*—In October, 1826, a young woman attempted to swallow three ounces of the sulphuric acid of the shops. The greater part of the acid was, however, rejected, and, according to her own account, only two or three spoonfuls went fairly down her throat. Her vomitings, cries, and convulsions, attracted the neighbours, who endeavoured to give her water to drink, but in vain, as she could not swallow. In the evening a physician was called to her assistance, who recommended leeches to the throat, and fomentations to the epigastrium; but the one produced no relief, and the other was insupportable. The wretched patient suffered inexpressible torture, and could only swallow a few spoonfuls of drink. It was on the fourth day from the accident that Dr. Lebidois saw the young woman. She was lying on her back, the lower limbs rigid, face pale, countenance sunk, tongue soft, moist, and white, as was the palatine arch; but the uvula and velum pendulum were of a deep red colour. She complained of severe pain in the tract of the œsophagus, augmented by pressure, or any attempt to swallow, cough, or even speak. The epigastrium was extremely sensible to pressure. The ingestion of the smallest quantity of fluids into the stomach caused nausea, and efforts to vomit. The abdomen was soft, and of natural temperature, pulse feeble, respiration slow, the lower extremities cold, intellect unaffected. In the course of the following days the symptoms became mitigated, and she could swallow some spoonfuls of broth; but emaciation advanced rapidly, without any febrile movements in the system. A troublesome cough now came on, and she sunk on the fifteenth day from the accident.

On dissection, the internal surface of the œsophagus was of a cherry red-

ness, and its structure so soft, that it was easily lacerated by the fingers. In the stomach there were various appearances, as long stripes, of a deep red colour—several spots where the mucous membrane was destroyed, and red granulations sprouting up. Near the pylorus, there was a gray membraniform layer, like that which covers an old blistered surface, beneath which, the mucous tissue was of a vivid red colour. The small intestines were of a violet colour, contracted, and containing only bile and mucus. The large intestines were empty, and rigidly contracted. The heart was very large—nearly twice its natural size—marks of engorgement and inflammation in the lungs—nothing extraordinary in any of the other viscera.

The principal object which Dr. Lebidois appears to have in view, in the publication of this case, is to show the remarkable want of febrile symptoms in a most intense gastro-enteritis. If, as the school of Broussais maintains, the phenomena of fever be owing to irritation or inflammation of the mucous membrane of the stomach and bowels, how is it that we had none of these phenomena present when the said membrane was intensely inflamed, and, in many places, destroyed? But then it is to be recollected, that inflammation of the stomach and bowels, resulting from general causes, as those of fever, applied to the constitution at large, is a very different thing from that phlogosis, which results from a direct local application of irritating or poisonous substances to the stomach itself. In the first case, the morbid agents, (say marsh miasma,) have acted on the nervous system, and reached the point of producing inflammation of the gastro-enteritic lining—in the other case, the local irritation acts at once on the stomach, and may not produce great constitutional disturbance in particular individuals.—*Archives Générales.*

78. *Experiments serving to determine the Question, whether, in cases of Poisoning, it is possible to discover the nature of the Poisonous Substance, even a long time after death.* By MM. ORFILA and LESEUR.—“These experiments, which appear to have had for their foundation judicial questions proposed in certain obscure cases of poisoning, have been conducted with equal patience, perseverance, and ability. The distinguished authors were aware that their difficulties would increase the farther putrefaction was advanced; and also that it would be much more easy to detect mineral than vegetable poisons, since these last lose their chemical properties by decomposition. Nevertheless, they have arrived at this remarkable conclusion—that if animal matters, mixed with a mineral poison, are immersed in a liquid, it is impossible, after a certain time, to recognize the poison in the liquid—but that it is decomposed, combined with the animal matter, or precipitated in the form of a powder, or magma; whilst vegetable poisons are always discovered in the liquid, and are only decomposed in part. MM. Orfila and Leseur instituted two sets of experiments:—1. Mineral and vegetable poisons, in large and small doses, dissolved in about a pint of water, were mixed with animal matter, and exposed, in vessels with large mouths, to the open air, for ten, fifteen, and eighteen months;—the water was renewed in proportion as it evaporated. 2. The same poisons, mixed with alimentary matter, such as albumen, meat, gelatine, &c. were enclosed in stomachs and intestines, which were placed in deal boxes, and buried in the earth to the depth of two feet and a half. After the lapse of several months, these boxes were opened, and their contents analyzed. On the other hand, in order to ascertain up to what period after death vestiges of the intestinal canal could be traced, dead human bodies were buried in deal coffins to the depth of four feet and a half, and disinterred one month, six months, ten, or even seventeen months afterwards. From these experiments, which are not yet concluded, it appears that even some years after death, and when no other remaining soft part is cognizable, that, on the sides of the vertebral column and in the abdomen, there is to be found a kind of brownish paste, or grease, which is evidently the remains of the digestive canal, and in which part the poisonous substance may

be found, either altered or in its natural state. The results of the experiments are as follow:—

“Sulphuric Acid, 1st concentrated.”—It is possible to distinguish its presence many months, or even years, after its mixture with animal matter. 2dly. *Very weak*, and mixed with substances which, during putrefaction, having given out a good deal of ammonia, it is saturated by this alkali, so as to leave little or no free acid at the end of a few months. In this case, the probability of poisoning is very weak; but if a certain quantity of free acid remained, its existence would be proved with certainty by treating the liquid with pure sub-carbonate of lime.

“Nitric Acid, 1st concentrated.”—This is cognizable several months after its mixture with animal matter, and whilst putrefaction is at its height. To succeed, recourse must be had rather to potash than to metallic copper. 2dly, *Weakened* with water, and used in small quantity, being actively saturated by ammonia resulting from the decomposition of bodies, the existence only of nitrate of ammonia can be proved; which, as it may result from putrefaction alone, does not necessarily imply poisoning.

“Arsenious Acid.”—It is possible to detect the presence of this acid even after the lapse of some years: nevertheless, to succeed in this, it must be freed from the greater part of the animal matters with which it is mixed, by evaporating to dryness the liquor containing it, and by shaking, for several minutes, in boiling distilled water, the product of the evaporation. If the arsenious acid has been employed in the solid form, it is not impossible, even a long time after interment, to discover here and there small grains, which, being detached by the help of a penknife, will present all the characters of this poison. Finally, as in process of time, it becomes changed into arsenite of ammonia, it may happen that, after the lapse of some years, it may not be possible to discover it, because the arsenite being *much more soluble* than the arsenious acid alone, may have passed through the holes of the coffin, or filtered through the wood. Employed in a large quantity, this acid arrests the process of animal putrefaction.

“Corrosive Sublimate.”—This poison, dissolved in water, is very easily decomposed by animal matter; so that it is not possible, after some days, to demonstrate its presence in the liquid, otherwise than by means of a plate of gold, and one of tin, assisted by the action of the hydrochloric acid. The more animal matter employed, the more sublimate will be decomposed. It does not appear, however, that they can decompose the whole of the sublimate; since, by the assistance of the plate of gold, it has been possible, at the end of *many hours*, to produce *an atom* of metallic mercury from a solution of six grains of sublimate mixed with a *great quantity* of animal matter. In every case, by treating these matters, which having decomposed the sublimate, with heat and with potash, it is possible to produce metallic mercury, even several years after the sublimate has acted upon them, therefore, if the presence of this metal does not prove the existence of sublimate, it proves, at least, the presence of some mercurial preparation.

“Tartar Emetic.”—This, mixed, with animal matter, is decomposed in a few days; so that the tartaric acid is destroyed, and the oxyd of antimony precipitated. It is, then, impossible to detect it by the reagents usually employed; but metallic antimony may be obtained from the animal matter even after the lapse of some months. The above alteration is rather the action of water and air upon the salts, than of the animal matters; for experiment proves, that a solution of three grains of tartar emetic in one pint and a half of distilled water, exposed to the air, undergoes the same decomposition; and that it is no more possible to recognize the presence of this salt at the end of thirty or forty days, than if gelatine or albumen had been added to it.

“Acetate of Lead.”—Experiment proves that it is not in the liquid in which it has been dissolved that this salt is to be found, if it has been in contact with animal matter; for it needs only the lapse of a short time, and not a single atom remains in the solution: but a certain quantity of metallic lead may be obtained

by drying the blackish-gray precipitate and the animal matter, and calcining them in a strong heat.

"Proto-hydro Chlorate of Tin.—Very little time elapses before the animal matter decomposes a watery solution of this substance. It is obtained by drying separately the intestines, and a grayish flocculent matter which is precipitated. By calcination the metallic tin is produced.

"Sulphate of Copper.—By mixture with animal matters, the deuto-sulphate of copper in solution, is decomposed so entirely, that, after a certain time, not any remains in the liquor. Nevertheless, this decomposition is not so rapid that a portion of the salt may not be found in solution after the lapse of a few months, if the operation has been performed with a few drachms of the deuto-sulphate; but in every case where the salt of copper cannot be found in the liquid, take the solid matters and heat them with charcoal to obtain the metal, whilst another portion of the charcoal should be heated with nitric acid, to obtain the nitrate of copper.

"Verdigris.—By remaining in contact with animal matter in the earth, it decomposes itself, and the deuto-oxide of copper forms, with the fat of the dead body, a sort of soapy matter insoluble in water. In a case of poisoning by this substance, it would be possible to demonstrate the presence of deuto-oxide of copper, by means of hydrochloric acid and calcination, many months, or even many years, after interment.

"Nitrate of Silver.—This substance, when dissolved, is rapidly and completely decomposed by animal matters; so that it would be necessary to endeavour to reproduce the metal from the solid substance, if called upon to pronounce upon a case of poisoning by this metal. By drying and calcining separately the intestines and a brownish flocculent precipitate which was formed in the experiment, metallic silver was produced.

"Hydro-Chlorate of Gold.—The same result as in the preceding case.

"Acetate of Morphia.—1. In a case of judicial disinterment, it is possible to detect the presence of this salt several months after death, or of morphia simply. 2. In order to do this, not only must the liquids be acted upon, but the suspected solid contents; because, if the poisoning had been accomplished by a watery solution of the acetate of morphia, this might have been decomposed, and the morphia partly precipitated. 3. Less morphia would, in truth, be precipitated than might be supposed, because part that had been decomposed would be redissolved by the ammonia formed during putrefaction. It is already known that in precipitating morphia in a weak solution of the acetate, by means of ammonia, it is sufficient to agitate the precipitate for a few moments, and in a mixture of water and ammonia, to redissolve it. 4. To obtain the morphia existing in the solid parts, these parts must be treated several times with alcohol; then, evaporating the solutions, treat the product with water mixed with acetic acid;—without this precaution, it would be difficult to separate the morphia from the fat of the dead body, which is formed abundantly when the body is in the earth. If, by chance, the liquid should be coloured, the colour may be removed by heating it with animal carbon purified, or by filtering it several times through that substance, without having recourse to the subacetate of lead, or hydro-sulphuric acid, which, to say the least, is useless. 5. It is easy to see, in comparing the action of nitric acid, and of the trito-hydro chlorate of iron, upon the substances that have been the subject of experiment, that the nitric acid has constantly reddened them, even when slightly coloured, whilst the salt of iron has only given them a blue tint when they were before perfectly colourless; and in some cases it has produced a reddish colour, although the matters were colourless. 6. It would be rash to pronounce *affirmatively*, in a judicial inquiry, that poisoning by a preparation of morphia had taken place, only because the blue and red colours had been observed: these would form merely a slight presumption. 7. This would not be the case if crystallized morphia could be obtained, (as in the experiments,) insoluble in water and ether, soluble in alcohol and in nitric acid, fusible in a gentle heat, and possessing, in short, all

the known characters of that substance; then it might be affirmed that the matter so treated was morphia.

“Hydro-Chlorate of Brucine.”—It is possible to prove the existence of this salt and of brucine in the digestive canal many months after death; but, as in the former case, mere colour cannot be relied upon, but the substance itself must be produced.

“Acetate of Strychnine.”—Detected many months after death, when mixed with animal matter, even though the mixture has been exposed to the air.

“Hydrocyanic Acid.”—From the experiments of M. Lassaigne, it is proved not to be possible to demonstrate by chemical means, small quantities of this acid three days after death. The disappearance of the poison depends upon its decomposition.

“Opium.”—1. The morphia existing in opium is not changed by its contact with animal matter, any more than the acetate or any other salt containing it. 2. It is much more difficult to prove the existence of opium when introduced into the stomach of a dead body, than merely a salt of morphia. 3. In any case, it is not possible to pronounce *affirmatively* upon a case of poisoning by opium, but by recognizing all its chemical and physical properties. This is not impossible to be done several days after death; but it may not be so easy to prove that the poisoning has taken place by mere opium, by morphia, or by one of its salts.

“Cantharides.”—An intestine contained a drachm of cantharides, powdered and mixed with meat and the white of an egg, were disinterred at the end of nine months: the matter contained in it was converted into the fat of dead bodies, and here and there was seen by the naked eye a multitude of shining points of a beautiful green, formed by the powder. By treating the mass with boiling water, the fat was melted, and came to the surface in the form of a layer of oil, whilst the bright particles fell to the bottom; these possessed all the properties of cantharides.

“The memoir is terminated by a question proposed by the authors themselves—viz. whether the same results would ensue in the dead body if poisoned during life? They answer, yes; if at the moment of death there remained a quantity of the poisonous substance in the intestinal canal, appreciable by chemical means. The chief point is to know whether this quantity, which the experimenter could discover twenty-four hours after death, could be detected ten, fifteen, or twenty months after interment; and they regard this possibility as placed beyond a doubt, by their experiments.”—London Medical Gazette, Vol. II. No. 34, from the Archives Générales, May, 1828.

CHEMISTRY.

79. *White species of Ipecacuanha.*—This has been analyzed by M. VAUQUELIN, and found to contain the same principles as the common species, but only half the quantity of emetine.—*Journal de Pharmacie.*

80. *Analysis of a specimen of Cutaneous Perspiration.* By J. BOSTOCK, M. D. —The quantity obtained was four ounces. “It was of a dingy brown colour, was somewhat opaque, without odour, and did not appear to be either viscid or tenacious: its specific gravity was 1.0117; it was very slightly alkaline. After standing at rest for twenty-four hours, it began to deposit a flocculent precipitate, which appeared to consist principally of fibres of wool or cotton, derived, as we may presume, from the clothes or bedding on which the perspiration had been deposited; after the separation of this substance the fluid was left nearly transparent, although the colour was not much changed: 500 grains of the fluid were exposed to the atmosphere in a shallow capsule: it underwent no perceptible change for several days, but at length the colour became deeper, and a

small quantity of brown matter adhered to the sides of the glass; at the same time it had acquired a slightly putrid odour. As the evaporation continued, a mass of crystals was gradually formed, which in the centre were well defined cubes, nearly without colour, surrounded by an imperfectly crystallized margin, mixed with a portion of extraneous matter. The capsule was then kept for some time at a temperature of 200° ; the residuum, when completely dried, amounted to 8.4 grains, indicating very nearly 1.7 per cent. of solid contents in the fluid. A second portion of the fluid, without previous exposure to the atmosphere, was evaporated at a temperature of 200° , until it appeared to be completely dried, when the amount of the residuum was found to be 1.32 per cent." On analysis it was found to consist of water 981.7—animal matter 4.6—muriate of soda 12.56—soda 1.14—phosphates and sulphates, a trace. Total, 1000.00.

The animal matter was found to be partly soluble and partly insoluble in alcohol. The alcohol being evaporated, afforded a residuum manifesting a certain resemblance to urea, being apparently intermediate in character between this substance and osmazome. The part which was insoluble in the alcohol, resembled most nearly the substance which forms the principal ingredient of the serosity of the blood. There was a very minute and scarcely appreciable portion of albumen, but no jelly.

A comparison of this analysis with the account given by Marcet and Berzelius of the composition of the serum, it appears that the perspiration in this case diffused from the serum of blood in the smaller proportion of the solid contents generally, and especially in the almost total absence of albumen; while it agrees with it in containing a considerable quantity of muriate of soda, a portion of uncombined soda, and a quantity of animal matter, which is similar to that contained in serosity. It must therefore be considered as essentially belonging to the class of serous fluids. The account given by Dr. Bostock of the perspiration agrees essentially with that of Thenard and of Professor Berzelius, except in one particular; both the latter found it to contain an uncombined acid.—*Médecino-Chirurgicale Transactions*, Vol. XIV.

MISCELLANEOUS.

81. *Seven Epileptic patients destroyed by excessive doses of the hydrocyanic or Prussic acid, prescribed by the physician of one of the principal hospitals in Paris.*—M. A. N. GENDRIX, has published in the *Journal Général de Médecine, de Chirurgie et de Pharmacie Françaises et Etrangères*, for June 1828, a detailed and highly interesting account of this affair. He states that M. Ferrus, physician to the Bicêtre, having in his private practice administered the Prussic acid with much advantage to patients with epilepsy, determined upon testing its effects upon a more extensive scale. He had been in the habit of exhibiting it in the form of syrup obtained from the shop of M. Pelletier, where it was prepared after the manner directed by Majendie in his formulary. The dose of this syrup which M. Ferrus commenced with, is that stated in the formulary as a medium, that is to say, half an ounce. Having chosen as the subject of further experiment fourteen epileptics, all between the ages of fifteen and thirty years, he prescribed for each the syrup of hydrocyanic acid, which medicine not being in the shop attached to the hospital, was procured from the *Pharmacie central des hôpitaux*. So much was he convinced from his former experience, of the safety with which this medicine might be given, that it is said he wished at first, to begin with an ounce at a dose, but upon being told by the apothecary of the institution that they had never exceeded a much smaller quantity, M. Ferrus contented himself with directing his ordinary dose of half an ounce. In conformity to the prescription of this physician, on the 17th of May, half an ounce of the cyanic syrup mixed in four ounces of the tisan of "*Chiendent*" was exhibited to each of

the epileptics. The person charged with this duty had already administered the medicine to seven patients, and was preparing to give it to others when his attention was directed to one of them, who appeared to be suffering very much. Retracing his steps he found the first patient already dead, the second expiring, and the third showing symptoms of the poison. In about fifteen or twenty minutes the seven patients were all dead!!

The effect of such a catastrophe in such a grand establishment as the Bicêtre, may be readily conceived. The noise quickly spread abroad, and reaching the ears of the judicial authorities, an inquest was immediately instituted at the instance of the *procureur* of the king.

M. Gendrin has very properly remarked, that the causes which led to this event merit a place in all the periodical works devoted to medicine, if it be for no other purpose than to prevent the occurrence of similar accidents. From his statement we draw the following particulars. A decree of the parliament of Paris, renders it obligatory upon all apothecaries in the kingdom, to regulate their official preparations in exact accordance with the formulas given in the *Codex medicamentarius*, or established Pharmacopœia. But this law has never been rigorously enforced, as the codex has been generally considered by the most intelligent of the profession as one of the worst of formularies. The cyanic syrup sent to the Bicêtre was prepared after the following direction in the codex:

R. Syrupi simplicis	9 partes.
Acidi hydrocyanici	1

Misceantur intime et excipiantur laguncula probe obturanda.

According to this prescription, the Prussic acid constitutes a tenth part by weight, so that each of the patients must have received in half an ounce of the syrup, nearly a drachm of the acid.

The preparation of Majendie, which M. Ferrus had been in the habit of prescribing in his private practice, and which is the only form of the medicine, to be found in all the apothecary shops of Paris, where the codex is never followed, contains but a one hundred and twenty-ninth part by weight of the Prussic acid, the formula directing 5j. of the hydrocyanic acid to be mixed with ℥ij. of simple syrup. Thus half an ounce of Majendie's preparation contains only two grains and twenty-four parts of a grain of the Prussic acid, whilst, as has been shown, that made by the directions in the codex contains nearly a drachm.

After a detailed exposure of the errors existing in the codex in regard to cyanic preparations, and the fatal consequences related as having resulted from the adoption of different formulas, M. Gendrin warns physicians against adopting any officinal preparation of a poisonous medicine, an error in the preparation of which might lead to fatal consequences. Whether it be the Prussic acid, the nux vomica, or any other poisonous article, that is to be given, it should always be added in substance to the quantity of the recipient required for its proper dilution. Thus with the Prussic acid, no accident would occur, if to a certain quantity of syrup there were added a certain number of drops of the acid, blended with six parts of water, as directed by Majendie. And there would be still less risk if the cyanure of potassium were prescribed in substance in the dose of a quarter or third of a grain.

82. *Encyclopedial Dictionary of the Medical Sciences*.—The Professors of the Medical Faculty of Berlin have commenced the publication of an Encyclopedial Dictionary of the Medical Sciences. It is to be completed in six years, and will consist of twenty-five volumes, thick octavo. The first volume has already been published, and is spoken highly of; it has been forwarded to us, but has not yet come to hand, we cannot therefore of course notice its merits, but from the talents engaged in the work, we feel assured that it will constitute a highly valuable contribution to our science.

83. *Institute for the Blind at Copenhagen*.—This institution was founded in 1811,

and possessed in 1826 a fund of 50,000 rix dollars. The number of blind in Denmark proper were nine hundred and seventy-six, of which thirty-eight were in Copenhagen, two hundred and fifty-six in the island of Seeland, one hundred and sixty-one in the islands Fionia, Laland, and Falster, four hundred and fifty-six in Jutland, and fifty-six in Alsen and Arron. Of this number fifty-one were received in the institution.—*Bulletin Med. Sci.* June, 1828.

84. *Yellow Fever*.—The commission named by the Academy of Sciences of Paris, to decree the prizes on Medicine and Surgery established by M. Montyon, awarded that of 10,000 frs. to Dr. Chervin for his researches on yellow fever. We make the following extract from their report. In the year 1814, Dr. Chervin began his researches at Guadaloupe, and not content with visiting every patient affected with yellow fever that he had access to, he made autopsical examinations on more than five hundred bodies, in fifteen months, at Pointe-a-Pitre, but this was not enough to satisfy him, he continued his researches in America for eight years, visiting every place in which the yellow fever appeared, traversing in this time not less than thirty thousand leagues. On his return to Europe, the fever was raging in Spain, and he immediately repaired to that country, and visited every place infected with the disease, the result of all his observations go to prove that yellow fever is not contagious; this opinion is strengthened by the opinion of five hundred out of six hundred and thirty American and Spanish physicians, whose answers to his questions he is now in possession of.—*Ibid.*

85. *Vaccination*.—In France, in 1825, 587,948 children were born, of whom 378,500 were vaccinated. 25,571 persons had the small-pox, of whom 2245 were disfigured and crippled, and 5369 died.

In the Neapolitan dominions in 1824, 231,936 children were born, of whom 67,974 were vaccinated.

In the Austrian Dominions.		Vacci- nated.	Succes- ful.	Spurious	Unsuc- cessful.	Unvacci- nated.	Small Pox.	Vario- loid.
Lower Austria - -	1822	28,035	26,532		1,503	14,449		
	1823	27,604	26,244		1,360	15,722		
Moravia and Austrian Silesia - - - -	1823	67,669	64,920	1,175	1,574	13,818		
Gallicia - - - -	1823	136,830	127,167	2,748	6,912			
Styria - - - -	1824	21,292	20,358	333	601	13,124		
Croatia - - - -	1824	20,172				9,598		
Military frontier -	1824-5	14,295			350	14,695	13,486	450
Maritime frontier -	1824	15,672	15,096	94	842	4,469		
Transylvania - -	1824	46,857						
Gallicia - - - -	1824	150,116	140,134	3,744	6,233	1,456		
Bohemia - - - -	1824	116,520	109,116	2,400	4,995	11,430		
Tyrol, &c. - - -	1823	22,048	21,054	228	766	9,063		
Lower Austria - -	1824	29,322	27,877	29	1,416			

86. *Secondary Symptoms of Syphilis after various modes of treatment*.—"An interesting comparative statement has lately been published in Sweden upon this subject. In the hospitals of that country during the year 1822, 3574 patients were treated; in 1823, 3465; in 1824, 3355; in 1825, 3337; in 1826, 3254; making altogether, 16,985 venereal patients in five years. Of this number 39½ per cent. were trusted solely to strict dietetic rules, and six weeks were generally found sufficient for the cure, if the symptoms were not very severe. Secondary symptoms happened in the proportion of 7½ per cent. The mercurial treatment was adopted in 49½ per cent. Of cases of secondary symp-

toms, there were 14 per cent. The fumigatory treatment by cinnabar, was employed in $6\frac{1}{2}$ per cent. The relapses were as 22 to the hundred. Local, and other modes of treatment, were ordered for $5\frac{1}{2}$ per cent., and of these 7 per cent. had after symptoms.

Calculations made upon such a scale are highly valuable, and must tend to settle the discrepant opinions of practitioners upon the comparative merits of the various modes of treating syphilis.—*London Medical Gazette*, Vol. I. No. 26, 1828.

87. *Anatomical Collection at Breslau*.—This is one of the most complete in Europe, it consists of eight thousand articles, of which six thousand are due to the labours of Professor Otto.—*Bulletin des Sciences Medicales*, March, 1828.

88. *Prize of Experimental Physiology*.—The Royal Academy of Sciences on the 16th of June last, awarded a gold medal to Dr. Dutrochet, for his discovery of the phenomena, to which he has given the name of endosmose and exosmose.

AMERICAN INTELLIGENCE.

On Dengue. By ISAAC HAYS, M. D. &c.—In our preceding number we published the first account* that had appeared of a very widely prevailing epidemic, to which the names dengue, dandy, bouquet, rheumatismus febrilis, &c. have been given, and in the present number will be found an interesting account of the disease, as it appeared in Charleston, S. C. by Professor Dickson. We propose, in this place, to present such further particulars respecting this epidemic as have come to our knowledge, and, as we think, will prove interesting to our readers.

The disease seems to have made its first appearance in the Caribean Islands, in the latter end of the year 1827, to have extended westward among the islands during the winter, and also to have spread to the ports on the Gulf of Mexico; thence it appears to have travelled north—for the ensuing spring it prevailed in New Orleans, and during the summer we find that Savannah and Charleston were severely visited by it. We have no evidence in our possession of its having extended north of this latter city. It is true, it has been said to have appeared in New York, and some cases are reported to have occurred in Philadelphia, but it certainly has not prevailed to any extent in the former city, and the few cases that were supposed to be dengue, and which have appeared in the latter, were, we suspect, only ordinary cases of rheumatism.

The epidemic made its appearance in the Island of St. Christopher, in the latter end of December, 1827. The disease commenced, according to Mr. Squar† with “very violent head-ache, severe pain in the temples, shooting towards the forehead; frequently it was situated in the back of the head, stretching towards the neck and shoulders, which was one of its most painful positions, as the least motion created great agony, and it was difficult to find an easy posture for the head. There frequently was a painful sensation as if the head were drawn down towards one side or another; pain, or, at all events, a disagreeable sense of stiffness, was felt in the eyes, especially when moving them from side to side, or raising them upwards: the patients expressed it, by saying the socket felt as if it were too small for the eyeball; frequently the eyes felt painful to the touch; the adnata was slightly tinged with red vessels.

“Shooting pains were at the same time felt in the back, loins, and thighs, particularly immediately over the knees, which soon became fixed and uncom-

* Account of a Disease called Dengue, &c. By G. F. Lehman, M. D. &c. Vol. II. p. 477. et seq.

† Paper on a singular description of disease, which prevailed in the island of St. Christopher, in the latter end of the year 1827, and beginning of 1828. By John Squar, Esq. Assistant Surgeon of the Ninety-third Regiment.—*London Medical and Physical Journal*, July, 1828.

monly severe: the same thing took place in the arms, forearms, wrists, fingers, knees, ankles, and feet, causing lameness; the calves of the legs were similarly affected.

"A roseolar eruption came out early in the disease, which covered the wrists and extended up the forearm: it spread over the backs of the hands; the ankles and feet were in the same state; it was sometimes elevated in large wheals, and when it affected the neck, it was extremely painful: the hands and feet were considerably swelled.

"In delicate females, the roseola came out on the face in patches, and on different parts of the body, and remained for several weeks after the other symptoms had disappeared.

"It need hardly be added, that motion of any kind greatly aggravated the symptoms, and the gentle pressure of the hand could scarcely be suffered.*

"Fever came on simultaneously with these various affections, or very soon was observed in conjunction with them, marked by a sense of heaviness in the head, and great listlessness, nausea, and loss of appetite, and, in delicate people, the irritability of stomach was sometimes distressing. Severe rigors, and alternating flushes of heat; face flushed; quick, full pulse; and hot dry skin; with, in a few cases, delirium, were also observed.

"Pain of stomach, sensible to gentle pressure, was present in one or two instances.

"The violence of the symptoms and fever lasted from four to five days; but it was never under seven or eight days that all the pains were gone. In most cases, the pains were felt for a much longer time; and in severe attacks, pain and tenderness to the touch remained in the eyes, hands, calves of the legs, ankles, and feet, for weeks afterwards.

"These symptoms varied in number and degree of violence, according to circumstances, and were much influenced by mode of living and constitution, sex, and age.

"The soldiers composing the garrison of Brimstone Hill, were less liable to this disease than the inhabitants; and their attacks were not of so long continuance, nor generally so severe. Nearly all the officers had it, and it was severe in one instance only. The very general run it took amongst the inhabitants had the effect of its being supposed to be epidemic; in many instances, not leaving a family till every one had been attacked.

"The young and robust had smart attacks, and fever of shorter duration, and they did not so often labour under its effects; and were even exempt from one or two symptoms that afflicted people of an opposite description.

"Delicate females and aged persons had more protracted attacks, and they suffered more from irritability of stomach; and the roseolar eruption in them was most remarkable; and the feet continued swelled and tender, producing lameness for some time: the fingers were also swelled and painful.

"On account of the lingering nature of the disease, many were induced to suppose that, during the space of eight or ten weeks, they had fresh attacks, and were even impressed with the idea that they must have a third attack before they could get well: this was owing to exposure to the cold damp weather, which at first caused it, and consequently easily re-excited the pains they had not entirely got quit of.

"This disease, in all the instances I have witnessed, was considered of a simple, and though of a violent nature, yet there was nothing dangerous in it. It has been said to have terminated fatally in one or two instances in this island: in some of the others it has caused death in several instances.

"This circumstance I am inclined to attribute to some untoward combination of disease, or might be the result of accident, as was the case in one instance. A coloured man, of the town of Old Road, having had symptoms of the disease,

* The stiffened form, occasioned by the pains in the head connected with the shoulder, and the dread of motion, obtained for it the fantastic name of "the dandy."

thought himself sufficiently well even to go to his work, imprudently bathed in the river, which aggravated the disease to such a degree as to cause his death: previous to which, the irritability of stomach was very great, vomiting quantities of black-looking matter repeatedly.

"Inflammation of the stomach, I am inclined to think, is the unfortunate combination which, in fatal cases, commonly is the cause of death. In a very few instances I have observed it in the commencement of the attack, and it was necessary to direct particular attention to this symptom, or combination; for, as there is a possibility of this combination appearing in greater or less degree, so as perhaps to be little heeded, and be allowed to proceed too far, without any precaution being taken to remove it, it is at once accounted for how it may become the cause of death, and confirms the truth of this opinion.

"Instances of relapses were few amongst the troops, and none of the lingering symptoms attached to them that have been enumerated in the description of the disease.

"Children seemed for some time to be exempt from this disease, but latterly they have also suffered. It was indicated by peevishness, and soreness on being touched; great irritability of stomach; in those who were able to walk, an imperfect manner of using the limbs was observed, causing them frequently to fall. Feverishness was present in all.

"There were a few peculiarities noticed in this disease, which entitled it to be considered as a novel and unknown kind of morbid affection. 1st. The extreme violence of the pains in the commencement, and the peculiar sensations they created. 2d. Perspiration was not easily excited. 3d. Thirst was not much complained of, even in the violence of the fever and in delicate females. 4th. The roseolar eruption above mentioned, and the swelling and tenderness of the hands and feet, was not often observed in the cases in the garrison. 5th. Delirium was chiefly confined to delicate females, and aged persons of weak, nervous constitution.

"The weather, previous to the appearance of the disease under consideration, and during its continuance, was of a nature unprecedented in severity in the West Indies, at least for very many years.

"In the latter end of November, and nearly up to the present period,* the weather became extremely boisterous, being nothing but a continuance of heavy rains and high winds; the evenings cold—very cold for this country, so much so that we were obliged to shut our doors and windows on sitting down to dinner; and we found it requisite to cover ourselves with a blanket at night. No Creole constitution could hold out against such weather; they are generally of such a frame that they are not at all capable of undergoing the fatigues and exposure of Europeans who have been a few years in this country. Besides, their mode of living and their habits are also very different from the regiments serving in the country. It was even surprising we escaped as we did; and although the dress of our men was not altered, which at the time was merely linen trowsers, and which could not guard them very well from the cold damp air of the night, yet we did not suffer in any thing like the way that the natives did. The greater part of our men are young, of strong constitutions, and well fed: it was not to be supposed that they could easily be affected by weather that to them must have been only agreeable.

"In treating this anomalous disease, the objects had in view were to lower increased action in the system, and to restore the deranged functions of the vessels of the skin, which might be almost considered the cause of the disease. In accomplishing these purposes, few means were required. The pain of head, and great degree of excitement in young men of stout habits, sometimes required blood-letting, but, generally speaking, it was seldom employed: there was a much better remedy found, which nearly answered both purposes, and that was cathartics. Aloes, colocynth with a combination of calomel, in the following proportions and manner of exhibition, was the usual plan adopted:—

* April 11th, 1823.

"R. Extract Colocynthis comp., Aloes Socotrinæ, Gummi Resinæ, āā gr. iij.; Hydrargyri Submuriatis gr. xxiv. fiat massa in pilulas duodecim dividend samantur tres h. s.

"On the following morning, the pills were assisted by doses of infusion of senna, to which was added a small quantity of neutral salts, or supertartrate of potass. This plan generally required to be repeated once or twice.

"When the action of the bowels was thus increased and kept up, the febrile action and violence of the symptoms underwent an almost immediate diminution, particularly the head-ache, which was the most distressing symptom. Cold water was at the same time applied to the head, by means of folds of linen.

"To determine to the skin was another mode of treatment employed, to remove altogether the pains of different parts of the body: this was effected by using the warm-bath, and giving small doses of antimonial or James's powder, with a few grains of calomel, three or four times a day; and keeping the body warm, from the commencement of the treatment.

"The diet was light and plain. Wine, when it might be advantageously employed, was given.

"When pain of stomach was present, which very rarely was the case, and when it was increased by pressure, its removal was always of the first moment; in doing which, the counter-irritation occasioned by the application of vesicants was a very powerful remedy. Gentle purgative injections at the same time were essentially useful.

"With regard to the employment of the sulphate of quinine, I am not able to bear testimony of any power it is supposed to possess in diminishing the violence of the symptoms, or in preventing returns of this disease and seeing no reason to believe that there existed any morbid consent between the sensorium and deranged impressions of distant parts, I never employed this medicine with the view of defeating its return. 'I must confess I used it, (the sulphate of quinine,) in one or two instances only, before the nature of the disease was exactly declared. It came on in subjects accustomed to frequent attacks of ague, the symptoms of which were chiefly complained of at the beginning. It afterwards turned out that violent pains, such as those that characterize rheumatismus febrilis, were conjoined; I therefore cannot positively decide in favour of the sulphate of quinine having any effect in shortening the disease, or in preventing its recurrence when it had apparently gone off.

"The disease was very apt to return, or, from having disappeared, was liable to be again excited, if the patients were unguardedly exposed to its causes, which have been stated to be an extraordinary degree of cold and damp in the atmosphere, and the prevalence of high winds, with heavy rain. Under these circumstances, the best security that could be had against its aggravation or recurrence was to defend the body by warm clothing, and confinement to the house, or even to the bed-room."

We are informed by persons who suffered from it at St. Thomas's, and at St. Croix, that the disease assumed the same character as at St. Christopher's; at St. Croix, however, it not unfrequently attacked the pleura, producing violent pleurisies; the intercostal muscles were also in these cases often the seat of severe pains. At St. Thomas's, we are told, that though the violence of the disease continued in almost all instances for three or four days, that a striking difference was observed in the influence of different modes of treatment upon the duration of convalescence. It is said that those who were treated by blood-letting and strict antiphlogistic measures, convalesced rapidly, whilst those who trusted their cure to laxatives and mild diaphoretics were afflicted with pains in different parts of their bodies, for one, two, and even three months. We expected to have been able to give a particular description of the epidemic as it appeared in the islands of St. Croix and St. Thomas, but the information we were promised, has not yet reached us.

Dr. Betton, of Germantown, has politely furnished us with the following extract of a letter from Dr. G. N. Stennett, giving an account of the disease as it presented itself in Jamaica.

"We have been visited with an endemic acute rheumatism, more severe than any I ever saw in Great Britain. It has passed all over the island, chiefly, however, prevailing in the towns along the sea-shore; this I attribute to the susceptibility of the people inhabiting these places, arising from their being accustomed to such constant heat. We have had since June, last year, almost constant rainy weather, and during the last few months, frequent northerly winds; the thermometer in the morning has generally been here at 64 Fahrenheit—a few times at 62. This disease has not produced any fatal effects, but after two or three days, hot fever, accompanied with severe pains of the joints; it generally terminates, leaving the patient very much debilitated, from which state he does not recover for weeks—sometimes the swellings become chronic, accompanied with slight fever at night, and much pain at that time. In some few cases eruptions of various sorts have preceded and accompanied the fever. In one case I saw, it extremely resembled rubeola. The negroes have been a good deal affected, but not so much as the whites. I find copious bleeding at first in able people, followed by small doses of Epsom salts and tartar emetic, so as to produce slight nausea and action on the bowels, together with warm salt water baths generally to remove the disease in three days."

The disease made its appearance at Havanna and its vicinity late in April of the present year, and attacked the inhabitants generally and almost simultaneously.*

"During" says Dr. Osgood,† "the whole of the last winter and spring, previously to the taking place of this new fever, many of the persons who had lately arrived in this climate were seized with the yellow fever. But as soon as the former began to prevail, the latter disappeared; although the residents, who had usually been exempt from the yellow fever, were seen, as well as the transient subjects, with symptoms resembling those of this latter disease, viz. after sensations of uncommon languor, chilliness and pain in the tendons of the smaller joints, they were suddenly attacked with a burning heat and redness of the skin, pains in the muscles of the limbs, or pain in the forehead, and a loathing or vomiting of whatever was taken into the stomach.

"The fever continued for one, two, or three days; and then usually terminated with a free sweating, which freed the patient likewise from his pains. But many after leaving their beds suffered by a renewal of their pains, which in some have become chronic. Others have also had a renewed attack of the fever.

"This disease of the season has not proved fatal, except to a few amongst the strangers, in whom the sweating stage of it did not easily take place, or was suddenly stopped by exposure to the open air.

"This moderation of the symptoms, in the generality of the subjects, I attribute to a gradual reduction of the vigour of their constitutions, by the influence upon them of the before-mentioned almost uninterrupted continuance of hot weather during all the seasons of the two last years past, and beyond what has happened in former years; which influence has rendered the native inhabitants, as well as the strangers in the climate, liable to be affected in this new way, by the same specific cause that, at other times, has produced the yellow fever in the latter class of the subjects.

"The Dengue has, as yet, only prevailed in the places to which the yellow fever has been limited. It has not spread into the interior of Cuba, although, at the end of five months from the time of its rise in Havanna, it continues to attack most of the persons who come to the city from the country, or from any place where it has not prevailed.

"2. The fatality of the yellow fever is known to be the greatest in the most robust of its subjects; and in those who, besides their recent exposure to the air of the West India climate, indulge themselves in hard drinking, or fatigue

* Remarks on Dengue. By David Osgood, M. D.—*Boston Medical and Surgical Journal*, Vol. 1. No. 36.

† *Op. cit.*

themselves by much exercise in the sun, whereby their strength is *suddenly depressed*.

"3. On the contrary, with a slight typhous affection contracted in a close prison, where hard drinking, or taking long walks, cannot be practised, the additional influence of the air of the climate, when it has caused a fever by sudden exposure to it, the symptoms have generally been very mild.

"4. The late comers to the West Indies from the colder latitudes experience soon after their arrival, a degree of exhaustion, and soreness in their muscles, like that which persons every where feel after violent exercise, or very great fatigue.

"The debility and soreness of the muscles and tendons in the subjects with the Dengue, before and after their symptoms of fever, may be attributed to the same cause.

"5. In several instances, since the prevalence of the Dengue, the worst symptoms of the yellow fever have supervened on those of the former.

"I may also mention here, that I know several persons, now long residents in this place, who since arriving here from abroad have escaped from an attack of the yellow fever, and have not hitherto been attacked by the Dengue; whereas every other person to whom I put the question, 'Have you had the Dengue?' answers 'Yes.'

"From the facts, &c. above stated, I have been led to consider the specific cause of the disease of the present time, and that of the yellow fever to be the same. The subjects have become altered in their constitutions; but the generating cause both of the new and of the old fever, remains unchanged."

Dr. Philip J. Dumaesq has communicated in a letter to one of the editors of the Boston Medical and Surgical Journal, the following description of the epidemic as it appeared at New Orleans.*

"The commencement of the disease is marked by the following symptoms:—Languor, disinclination to muscular exercise, slight chilliness, with dryness of the skin and fauces; the tongue at first is covered with a whitish coat, which afterwards gives place to a yellow; at which time there is a degree of nausea, in the generality of instances trifling. From the first great thirst is experienced, pain and heaviness of the head, depression of the mental powers, frequent yawning, and disinclination to food. These symptoms generally made their appearance in the course of the day, and in the evening fever supervened, which gradually increased through the night, and decreased towards morning, when a partial relief was obtained by a gentle diaphoresis. The time of its duration varied exceedingly, according to the different idiosyncracies of individuals. In some the fever continued but twelve, in others twenty and forty-eight hours, and even to a longer period in a few.

"The peculiar phenomena of this fever are pains in different parts of the body; in the head, arms, loins, and down the course of the crural nerve. The pains in the body and extremities are confined to the muscles, resembling those produced by an attack of acute rheumatism. The suffering, I may say with propriety, is extreme; rest can be obtained in no one situation, and a momentary comfort is obtained by tossing about and stretching the limbs.

"With a parched skin, and fauces completely dry, rendering deglutition difficult, fluids are frequently demanded, and although the quantity taken in some instances is great, no part appeared to escape by the skin, and very little comparatively from the kidneys.

"The head-ache during the fever is not uniformly severe, but is more so in its decline, generally affecting one side of the head more than the other, and with its concomitant symptoms resembling cephalæa hemicrania.

"In some persons the fever was slight, with little prostration of strength, accompanied by cough and soreness of the fauces, terminating about the second day with a scarlet eruption. In these, so much were the appearances like

* Boston Medical and Surgical Journal, Vol. I. No. 32.

scarlatina, that a few old practitioners pronounced it to be that disease; and the appearance of almost every person, a few days after the fever had gone off being marked by a continuous rash over the face, body, and extremities seemed to favour this opinion very much. But from the short duration of this eruption, the type and severity of the fever preceding it, (being synochus rather than typhus,) and the absence of some of the particular symptoms of scarlatina, clearly prove it was not this disease; the state of convalescence also being marked by appearances which are never discovered in that succeeding the latter disease.

"A peculiar symptom of this fever in infants, is convulsions—during which the body is bathed in a copious sweat; the action of respiration seems almost suspended; the eyes are fixed, wildly staring in a direct line from the body; the nostrils are dilated, and there is apparently an effort made to take breath, which a fixed position of the ribs and perhaps a spasmodic contraction of the diaphragm will allow but in a very limited degree. The partial respiration is accompanied now and then with a low moan, which is caused, I think, by the difficulty attending the effort in making a full inhalation, which is wholly impracticable during the paroxysm; rather than from any pain the little sufferer is experiencing at the time.

"The convulsion is of short duration, and attended with very little muscular effort; in most instances none. The common mode of treatment is plunging the child in warm water, and holding it there until the breathing becomes free, or else merely bathing the extremities.

"In young persons of a good constitution, the disease has been as severe in its attack, as in those of a more weakly habit, but reached its acme much sooner, and terminated more kindly in the former, and more so in the latter than in very old persons, and those who were rendered imbecile from previous bad habits.

"A person on the disappearance of this fever would attempt to rise from bed, feeling not much loss of strength, and a consciousness of being able to move about and attend a little to business; but how egregiously would he be mistaken when he assumed the upright posture! The joints felt as if fettered or ankylosed, and the advance of one foot or leg beyond the other, would cost more pain and effort than the purpose for which it may have been advanced was worth—aye, a thousand times told!

"This was a singular termination of the disease, leaving sufferers from the fever hardly able to move about; and indeed the appearance of persons in the streets, and every where else, must have been truly pitiable to a healthy stranger; the apparently great and often fruitless efforts to make a step; here one would be seen dragging his legs after him, supported on crutches; and there another with limping gait and various contortions of countenance, bespeaking that his tardy progress was made at the expense of his bodily feelings.

"The greatest pain in moving the leg, was experienced down the gastrocnemius muscle and about the tendo achilles; although pain was general in the muscles and down the course of the tendons. The muscles of the arm were also painful; and the wrist in some instances was swollen, and not yielding to the slightest motion without giving much pain.

"The muscles of the neck were likewise painful, stiff, and producing what is called stiff-neck, (*loxia*,) which in some continued longer than the stiffness in the limbs. A singular case was related to me by a physician, of a lady, who, whenever she would attempt to walk, and had placed her foot on the ground for that purpose, experienced a severe pain darting from one of the toes up the leg and across the body to the clavicle of the opposite side. She was relieved by the application of a blister below the clavicle.

"In many cases, after the fever had gone off a violent purging supervened, with severe griping pains in the abdomen; and the persons were harassed with a constant desire to go to stool, so strong that it must be immediately gratified, and the result would be, a small quantity of frothy mucus mixed with blood and

little bits of fæces. In a few of these which came under my own care, I found the most efficacious mode of treatment in the application of flannels, wrung out from hot water, to the abdomen; with a moderate dose of calomel combined with a little opium, administered in the form of pills. Soon after the applications of flannel and the exhibition of the medicine, the pains, with the violent desire to go to stool frequently, ceased as if by a charm, and the patient felt tranquil and disposed to sleep.

"Another singular affection noticed in many persons after the fever, was a swelling behind one or both of the ears, immediately over the mastoid process. The appearance of this swelling, with the pain attending it, resembled very much an incipient phlegmon; but its continuance was short and its disappearance rather sudden, without suppuration, and without the aid of any local application.

"The most singular local affection which supervened after the fever had entirely disappeared, several cases of which I was informed about, and one I had under my own care, was an itching sensation in the urethra throughout the whole track, with a slight discharge of pus, and a severe burning pain at first about an inch down the canal, experienced in passing water. These symptoms resembled so closely those of blenorrhœa luodes, that the disease was pronounced to be that; but from the asseverations of patients to the contrary, it was attributed to the fever; and I believe with propriety.

"In another case under my care, the inflammation continued but twenty-four hours the specific distance in the urethra, and then shifted to the bulb and neck of the bladder. Great irritation was experienced about the anus from sympathy, and sometimes the sphincter became spasmodically contracted when an attempt was made to evacuate the rectum.

"This person had been troubled with an ardor urinæ for three or four days before he observed any discharge from the urethra; and soon after this commenced, the inflammation and soreness shifted to the parts already mentioned. There was not that fulness of the glands, and kind of transparency about the orifice of the urethra observed in blenorrhœa luodes—neither was there a correspondence in some other symptoms.

"I was informed by a gentleman, about thirty years of age, who is now labouring under this singular affection, that he had lost entirely his sexual feelings.

"In this affection the ardor urinæ is not so great after the inflammation shifts as at the first; but the desire to evacuate the bladder is more urgent, and the pain is experienced in injecting the last drops, about the bulb of the urethra. To what length of time the duration of this affection is limited I cannot positively say, having heard of no person who is entirely free from it at this present time; but I am told that the fortieth day from the commencement the fever terminates with its unpleasant effects; and this being one of them, a few persons afflicted with it are anxiously looking forward to that day, which they hope will bring relief.

"The treatment has hitherto consisted in a moderate and light diet, abstinence from spirituous and vinous liquors, and the use of the mineral acids, chiefly the nitric. Other medicines are considered unnecessary, as the general health is good, and the bowels unconfined. I believe the terebinthines, and other medicines which may have a specific effect in the generality of diseases affecting the mucous membrane, would avail nothing in this; and any local application that may check the discharge would endanger the general health, as from the circumstances preceding and attending it, it appears an effort of nature to remove in this way some latent remains of the disease. And this supposition is strengthened by the fact that persons in whom this has appeared after the fever, have been free from the kind of rheumatic pains and stiffness observed in others.

"This epidemic has been so general, that in families of twenty and thirty persons it was very seldom found that one escaped. Perhaps in the annals of me-

dicine there is not a disease recorded so severe in its accession and duration, so various in its symptoms in different individuals, and so very seldom leading to a fatal issue. Out of the many thousands afflicted with it in this city, not more than four or five have died, and in these it appeared to be combined with some organic difficulty, and especially of the liver, which gave it the semblance of yellow fever, and such it was considered by some.

"The general treatment of the disease in this place has been very simple: in most instances nature was allowed to effect a cure without the interference of art; and the progress of those towards amendment who were treated medically was not more rapid than those in whom the disease was allowed to run its course, and have completely its own way.

"Fluids were often required, from the severe thirst which was truly distressing, and they were given warm that they might afford present relief, and also promote diaphoresis, which, when it did take place, mitigated the severity of the fever and pains in various parts.

"A cathartic was administered to some after the fever had subsided, and the scarlet eruption was found to appear somewhat sooner in them than in others who took no purgative medicine; but the only difference consisted in this. The eruption was not general in its appearance, many persons who had had the fever being totally exempt from it, but having all the other difficulties which appeared after the termination of the fever.

"I have had this fever myself; it was preceded by the usual symptoms, and commenced about eight o'clock in the evening, gradually increasing throughout the night, and diminishing towards morning, when I experienced a partial relief from an irregular sweat which broke out in different parts of my body. I arose and took a glass of soda water, which increased the diaphoresis, but I was not free from fever: in a short time it became more violent, with severe pains in all parts of my body; and I was obliged to lie down. The pain in my head was excruciating, and confined to one side, which was so sore I could not bear any thing to touch it; and my limbs felt as if they had been severely bruised. The fever continued forty-eight hours, and then went off with a copious sweat, which drenched the whole of my body; leaving me, however, not entirely free from pain, and so stiff in my joints, that I could hardly move my limbs; and could not bend my body, or turn my head without experiencing pain.

"Two days after the fever left me, a rash made its appearance on the skin, covering my face, body, and extremities; it was accompanied by a slight itching and a sensation of great heat over the whole surface; the discharge from the pores at the same time was free, and sometimes copious, without diminishing in the least the unpleasant sensations of heat and itching.

"In my case the rash lasted twenty-four hours, but in many others much longer: but never, as far as I could ascertain, beyond the second or third day. In most cases it appeared twenty-four hours, or thereabout, after the subsidence of fever, and continued nearly the same length of time; but the pains and stiffness in the limbs continued much longer, and lasted in young persons from two to four days, or a week, and in the aged far beyond this time, even to the second and third week, and some are not rid of it at present, in whom the disease commenced nearly a month ago.

"A few individuals have had fresh accessions of fever of the same kind since its first attack, but I think it must have been caused by intemperance in eating and drinking.

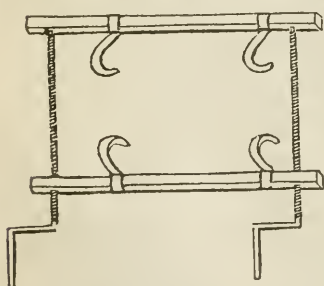
"For a few days after the fever, the appetite is very poor, and every thing that may be taken as food or drink has a highly bitter taste; this soon wears off, and the appetite generally returns with the natural taste of thing."

For an account of the epidemic as it appeared in Charleston, S. C. we refer to the excellent paper of Professor Dickson, in our present number, p. 3. It may be, perhaps, allowable for us to remark here, that our esteemed coadjutor has not, we think, made out one of the characters that he has ascribed to the disease:

its being contagious. Possessing every confidence in the discriminating judgment of Professor Dickson, and allowing all possible weight to the facts which he has stated, and to the circumstance of his having witnessed the disease, which we have not, we are nevertheless, after a consideration of all that we can collect on the subject, irresistibly led to the conclusion that the disease never possesses such a character. In New Orleans, says Dr. Dumaresq,* "the disease was not propagated by contagion, for persons were attacked by it at the same time, and its spread was so rapid among the inhabitants that in eight or ten days at least one-third of the population was labouring under its influence, including persons of all ages and different sexes." We have been informed of a family in New Orleans, consisting of twenty-one individuals, nineteen of whom were suffering from the disease at the same period. Mr. Squaer in noticing the idea of the disease having been brought to St. Christopher's by contagion, says, "proof enough will be afforded to upset this idea, in speaking of the comparative prevalence of this disease amongst the troops of the garrison, and inhabitants." The whole character of the disease, indeed, it must be acceded, is that of an epidemic, and not of a contagious affection. But it is not our purpose to enter into the discussion of this point but to present the facts that we have been able to collect.

Since Professor Dickson's paper was printed off, we have been favoured with a letter from him, in which he states that he has "just met with a brief notice of 'an epidemic inflammatory fever, prevalent some time since in Calcutta and its environs,' contained in the Edinburgh Medical and Surgical Journal, for 1826, vol. 26, in a review of the Transactions of the Medical and Physical Society of Calcutta, for 1825. This volume of transactions we have not been able to obtain, but cannot avoid inferring from all that is said on the subject, the absolute identity of the Indian epidemic with ours. So general was it in its prevalence, that scarcely an individual escaped, yet it scarcely ever proved fatal. Its sequelæ, however, were often severe, chiefly the debility and lasting pains in several joints large and small, sometimes in one finger. While one writer thinks it necessary to distinguish it from rheumatic fever, another considers it a mild scarlatina modified by tropical climates. Reflecting on the appearance and mode of appearing of the cutaneous eruption, the rheumatic pains, the epidemic characters, and the third day critical, with or without adding the tendency to cyanache, and the succeeding unaccountable extreme prostration of strength, I cannot seek for the same train of symptoms in any other disease."

Description of an Instrument for Separating the Sternum. By W. E. HORNER,



M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.—The instrument represented by the accompanying figure, is intended to assist the practical anatomist in getting at the heart of a subject for the purpose of injecting it, without cutting out the sternum, which is the usual mode.

It consists of two bars of iron rather larger than the sternum, each one being furnished with two flat hooks, and one having two screws which work in pivot holes in the other. The bars are separable. To apply the instrument, saw through the middle of the sternum, then fix the bars one after the other by hooking them on the cut edge of the bone, and adjusting the point of the screws in the pivot holes. By turning the handle of the screws, the two halves of the sternum may be separated to any requisite extent.

This simple instrument, invented by myself, I have used for some years in

* Op. Cit. p. 497.

the University, I find it perfectly effectual in the object proposed, and much better than any other plan than I have ever heard of, or seen.

On the discharge of various matters from the Trachea. By J. R. COXE, M. D. &c.—As I have had occasion frequently to advert, in my paper on croup in the present number of this Journal, to the probable mistakes of old writers respecting the supposed discharges of worms, &c. from the trachea, I think it may not be amiss to point out a few instances of similar mistakes nearer our own times.

Tulpius, who has been noticed at the commencement of my paper, (he was born 1593—died 1679,) in his *Observ. Med.* lib. 4. c. 9. p. 294, mentions a tailor who expectorated an extraordinary membrane; which he was at a loss to account for, but finally concluded it was formed in the trachea. The twelfth observation of his second book, mentions a young man who discharged a portion of the pulmonary artery as long as the little finger, with its ramifications. Another, who threw up two considerable branches of the pulmonary vein, separated from the lung to their extreme ramifications, as if dissected patiently by an anatomist, and without any suppuration; and which very preparation was publicly demonstrated by Paaw, professor of anatomy at Amsterdam, as a “*miraculum inauditum*.”

In 1649, Th. Bartholine, (*Hist. Cent. III. hist. 98.*) mentions his receiving from S. Pauli the branch and ramifications of a pulmonary vein, which a man had discharged by expectoration, as accurately separated from the parenchyma of the lungs as if dissected out.

In the *Leipsic acts*, 1683, an account was given of the expulsion of the portion of the pulmonary vein by a severe cough; that it was entirely detached from the substance of the lungs, and divided into several branches.

In the *Philosophical Transactions* of G. B. vol. 19, No. 235, a communication is made by Dr. Lister, 1697, from Mr. R. Clarke, of a polypus of the lungs discharged by a tailor, and which had been repeatedly done within the last three years. Dr. Lister, whose advice and opinion is asked respecting the case, considers them as the mucous humour of the small glands, hardened in their ducts, &c.

In 1700, Bussiere, a French surgeon in London, reported to the Royal Society, of which he was a member, the account of a substance expectorated by coughing, which resembled the vessels of the lungs, (*Vol. 22, No. 263.*) by a child of five years of age. He was affected with phthisis, accompanied with a dry cough, which had come about a year previously. About ten or twelve days preceding death, he began to discharge certain matters, having the form and consistence of a vessel. After death he was examined, and a small quantity of purulent matter was found in the left lung. On opening the trachea, there was noticed, internally, a layer of glutinous matter, which was removed in one piece; forming, from the larynx to the extremities of the bronchia, one single tube, detached without difficulty, and without tearing, in the slightest degree, either trunk or ramifications. It had no adherence to the internal membrane of the trachea, except by some few small threads, so slender as readily to yield. It was put into hot water, but experienced no change. The author remarks, that this case may serve to undeceive those who, on the testimony of certain writers, imagine it possible for the sick to cough up the pulmonary vessels.

In 1704, the celebrated Lemery is stated, in the “*Hist. de l’Acad. des Sciences*,” to have seen a patient discharge by coughing, amongst thick phlegm, white fibres as large as a chicken’s feather, and ramified, resembling the figures of the veins—hollow, &c. and which he supposed to be polypi, similar to those of the heart, &c.

In 1727, (*Philos. Trans. No. 398.*) Dr. Samber gives an account of a tracheal polypus, discharged by expectoration, the figure of which is engraved in that work; and in the same, for 1731, Dr. Nichols states a case of a similar nature.

I might enumerate many others of a like character; all, however, tending to

elucidate the statements of earlier ages of the discharge of worms, of the vessels of the lungs, of the inner membrane of the trachea, &c. but which, from a more enlightened pathology, would, probably now, be ascribed to causes connected more or less with croup.

On Prussiate of Iron in Intermittent Fevers. By WILLIAM M. FARNESTOCK.—In the last number of the *American Journal of the Medical Sciences*, I observe a paper on the use of the prussiate of iron in intermittent fever, by Dr. Jackson, of Northumberland, who recommends it as “safer than bark in domestic use, and in the hands of the ignorant.” My experience with the prussiate of iron, is perhaps not so great as that of the author alluded to, but it is sufficient to make me very cautious in using the medicine, if not to abandon it entirely.

I was called to the charge of the *Dauphin County Alms-house Infirmary*, in January, 1824, where I found eighteen cases of old standing intermittents: four quotidians, six tertians, and eight quartans; some of two, four, six, and nine months duration, in which the bark, arsenic, &c. had been used by the former physician without much benefit. I determined on making a fair trial of the prussiate of iron, and after preparing the system by calomel, jalap, &c. I ordered the prussiate to all of them, in doses of six to ten grains every three hours, in the quotidian cases every two hours. Of the four first cases, two had no return of the paroxysm; the other two passed the second interval without any accession of fever; the tertian cases had no recurrence of the disease whatever; and of the eight quartan, five recovered, but in the remaining three it produced congestion of the brain, one of which proved fatal.

Intimidated by the termination of this case, I was deterred from using it until after my removal to the vicinity of the Schuylkill, in Philadelphia county, where the disease prevailed very extensively, and assumed an extremely obstinate character. Recourse then was had to it, and the success was so great that it became a popular remedy, under the title of “indigo powders,” and the practice was imitated by every economist, carefully premising its use by evacuants. Here again I had the pain to witness its deleterious effects in two children to whom it had been given “without medical advice.” Violent cerebral excitement, excruciating pain in the temples, restlessness and delirium ensued, which were subdued in one case by very strict and persevering attention to the proper treatment; the other was followed by coma, tremors, and death.

I do not wish to dampen a further investigation of this substance; on the contrary, I feel much anxiety on the subject, and would be pleased were it to prove an innocent and efficient remedy, and that the fatality in the cases which came under my observation, are to be attributed to some adventitious circumstances; but it is my duty to advertise the experimenter of the bad consequences which have attended its administration in my practice. “One potent argument,” says Dr. Jackson, “in favour of it is this: it often produces symptoms of intoxication, with all those distressing affections of the head, obtuseness of seeing and hearing, with ringing in the ears, which often followed the use of the quinine.” This I should regard as the nosometer of the distressed system—the admonitory index denoting the degree of the charge, as Henley’s quadrant electrometer does that of the electric battery.

A Case of Tetanus, accompanied and followed by a severe Affection of the Muscles of the Right Arm and Shoulder, successfully treated. By GEORGE W. STEDMAN, M. D. of St. Croix, Member of the Medico-Chirurgical Society of Edinburgh, and formerly President of the Royal Medical Society of Edinburgh.—On the 19th of January, 1828, I was called to Butler’s Bay, the property of John Sempill, Esq. to see a black man, named Kinsale, about thirty-six years of age.

The patient had had the new fever, called here by the common people, the *bouquet or dandy fever*, but which I propose to call the *eruptive rheumatic fever*.

The fever had been followed by an acute and continued pain of the shoulder, stretching down the muscles of the humerus, which, however, had been so

much lessened by a blister as to enable him to do some light work about the estate.

Last night he took his turn to watch in the yard, and had probably exposed himself to cold, for this morning he was seized with the following symptoms:—

Intense pain in the chest, violent spasms and contractions of the muscles of the chest, neck, face, arms, and slight spasms of the legs. The pain of the chest was much aggravated during the spasms, and probably arose from the violent spasmodic contraction of the diaphragm, which is so common a symptom in tetanus. His mouth was violently shut, his teeth clenched, and the masseter muscles were swelled and spasmodically contracted. These spasms recurred every three or four minutes. His pulse was strong, full, tense, and quick, and he had the peculiar anxious expression of countenance which marks tetanus. His skin was warm, and partially bedewed with perspiration. No wound or hurt could be discovered in any part of the body after a most careful examination. He had been in the warm bath, and had taken twenty drops of laudanum before I saw him.

I bled him in the arm from a large orifice to the amount of twenty ounces. The blood immediately adhered to the vessel, and exhibited white streaks of coagulable lymph on its surface, which I have always observed in the commencement of inflammation. He experienced much relief from the bleeding; the spasms became less frequent and less violent. I next gave him forty drops of laudanum, and put a blister on his chest.

My father saw him about two hours afterwards, and found him easier, and the spasms much diminished. As his bowels were not sufficiently open, he ordered several strong injections to be given, and then fifty to sixty drops of laudanum every four hours. He directed the patient at the same time to be put into a warm sand-bath, and to be kept there night and day until he got better.

About 3 P. M. his bowels were fully opened, and an immense quantity of feces was passed. The doses of laudanum were commenced at that time, and given every four hours.

About 5 P. M. the spasms disappeared altogether, though considerable rigidity both of the jaws and neck continued, accompanied by great difficulty of swallowing. He slept a little, with apparent relief between the doses of laudanum. The blister rose well, and according to the patient, afforded him much relief. Some wine, by my father's directions, was occasionally given to him.

Monday, 20th. At 11 A. M. I visited the patient. By this time he had taken four hundred drops of laudanum. He seemed easier, and had had no more spasms, although the muscles of the face were still rigid, and he could open his jaws but very little. Ordered the sand-bath to be continued, several injections to be given, the quantity of laudanum to be administered only every eight hours.

Tuesday, 21st. I found him worse; pulse very strong, tense, and quick; heat of skin considerable; more difficulty of swallowing; the most intense pain in the shoulder, with stiffness of arm. He had taken only one hundred and forty drops of laudanum since I saw him. His bowels were but scantily open, though injections and castor oil had been given. He slept tolerably well, however, during the night, and took some nourishment.

I bled him to $\text{̄}xv$. when his pulse became small and soft; the blood was strongly adherent, though less streaked than before, having only one white spot upon it. He felt much relieved by the bleeding. I directed the laudanum to be discontinued, until his bowels were fully opened, and a mustard plaster to be applied to the affected shoulder. The sand-bath to be continued.

Wednesday, 22d. The opening medicines operated well. He was every way easier, though stiffness of muscles still continues. Quantity of laudanum taken since yesterday one hundred and seventy drops; sand-bath continued.

Friday, 24th. He was worse; had spasms in face, neck, and shoulder; complained of great pain of shoulder, chest, and abdomen; bowels not open. Ordered blister to shoulder; copious injections; and castor oil.

Saturday, 25th. Blister afforded him much relief; bowels well opened; all

symptoms better; countenance better; mercurial plaster to shoulder. Quantity of laudanum taken since Wednesday, eight hundred and ninety drops. Ordered sand-bath to be continued.

Wednesday, 29th. His skin is covered with a miliary eruption, from the continued use of the sand-bath. He has had injections daily, which keep his bowels open. Mercurial plaster relieved the shoulder. Since Sunday he has been taking, by my father's desire, three tea-spoonsful of bark daily; three wine-glassfuls of wine, and two large glasses of warm water and rum. He cannot yet lift his right hand to his mouth. When he attempts to sit up or move, he says he feels as if his neck and heels were tied together. Quantity of laudanum taken since Saturday, one thousand one hundred and seventy drops. Ordered the sand-bath to be discontinued, and the warm-bath used every evening instead of it. Two opium pills to be taken every night instead of the laudanum.

February 1st. My father ordered the warm-bath to be discontinued, two calomel pills to be taken every night to bring on salivation, in order to relieve the rigidity of the muscles of the jaw, and the pain in the shoulder; his cheeks to be rubbed with anodyne liniment; laudanum to be resumed. Quantity of opium gr. iv.

February 11th. Chief complaint is now of his shoulder; says that the whole of the right side feels numb; tongue clean; bowels open. Laudanum six hundred and thirty drops; opium, gr. xiv.

He is now salivated. The tetanic affection seems to be conquered. He has still, however, great rigidity in the muscles of the face and jaw, especially the masseters. The laudanum and opium were now discontinued, and he was ordered thirty drops of tincture of colchicum autumnale twice a day, for affection of the shoulder.

February 25th. There is still so much rigidity in the masseter muscles, as to prevent him from opening his jaws fully. His shoulder still continues to give him very great pain, especially the deltoid muscle, on which he cannot bear the slightest touch. He cannot lift his hand to his chin, and the motions of his shoulder are so limited that his arm is useless to him. The least motion gives him the most acute pain.

Without apprising the patient of my intention, I thrust a needle, manufactured in London, for the purpose of acupuncture, into the upper third of the thick fleshy belly of the deltoid. The needle was introduced nearly an inch. The patient did not evince the slightest sense of pain on the occasion. Upon pressing with my fingers on the part which had pained him before, I found that the pain had entirely ceased, and he could now bear any part of the shoulder to be pressed and squeezed. I told him to put his hand on his head. He smiled incredulously, but being encouraged, he began to raise his hand slowly towards his head, expecting every moment to be arrested by the accustomed pain. To his infinite surprise, however, he found that he could first put it on his forehead, and then on the top of his head, with the greatest ease. He could now also move his arm backwards and forwards, which he could not even attempt before. He complained that the pain had moved down his arm to the situation of the biceps muscle. The pain here seemed acute. I instantly plunged another needle about an inch long into the lower third of the deltoid. This at first gave him much pain, for he cried out, and seemed about to faint. He was revived by drinking some water. He now declared that all pain had left his arm, and he could move it much more freely than before. He seemed quite delighted with the new power of motion which he had acquired, and repeatedly swung his arm round and round. The needles were left in about seven minutes. He continued to improve until the 11th of March, when, having a recurrence of stiffness in his shoulder, with pain stretching up the muscles of the neck, recourse was again had to acupuncture with complete success.

I may take this opportunity of mentioning a curious case that occurred to me some time ago. I was called to Mount Victory, the property of James Codwise, Esq. to see a negro girl, about ten years of age, labouring under *tetanus*. I found

her suffering under the severest form of the disease, with violent *episthotonos*. She had not been exposed to cold, nor was there any apparent cause for the disease, except the state of her feet. Between the toes, on both feet, were deep holes, festered at the edges, causing a swelling all along the fore part of the feet. These were caused by a number of the insects called here the *Chugine*, (the *Pediculus penetrans*,) which burrows under the skin, and deposits its larvæ in a bag. This at first gives rise to a degree of titillation, that is often considered a sort of luxury by the negroes. When the part inflames, the irritation it creates is so great as to give a great deal of uneasiness, and even to prevent sleep, as I have myself felt. I have no doubt that this was the cause of the tetanus, which proved fatal, notwithstanding every remedy that could be thought of. Other instances like this have, I am told, occurred to some of the practitioners in this island.

On the Use of the warm Sand-bath in Tetanus. By GEORGE W. STEDMAN, M. D. of St. Croix, &c.—The warm bath has been generally approved in the treatment of tetanus, but it has been objected to on account of the necessity of moving the patient to and from the bath, and the consequent danger of renewing the paroxysms by the motion.

This danger has been considered so great as to cause most judicious writers to dissuade from the use of it altogether. Some have proposed warm fomentations as a substitute, but these are comparatively inefficient. It is singular that none have thought of proposing the *warm sand-bath*, which not only possesses all the advantages of a warm water-bath, but obviates the only feasible objection that can be brought against it—that of the necessity of moving the patient. I have examined the works of most of the systematic writers on medicine, and of most of the authors on tetanus, and no where do I find any trace of so simple and effectual a remedy. It is one, however, that has been used for some years here, and has been often employed by my father.

The *sand-bath* is prepared in the following manner:—A quantity of sand is heated to as high a point as the patient can bear it; this is formed into a bed of from four to six inches thick, and a blanket is put over it, upon which the patient lies; another blanket covers him. A bag of heated sand is also applied to his jaws, and another, if necessary, may be laid upon his body. By these means he is kept day and night in a state of profuse perspiration. Little or no motion is necessary, as the sand can be taken away and renewed in different portions as it grows cold.

A Case of Swelling of the Ankle-joint cured by Acupuncture. By Dr. JONAS DAVIS, of Jackson, Tennessee.—Miss H. aged eighteen, of robust constitution, and corpulent habit, was attacked on the 6th of July, 1828, with severe pain in the right foot, near her toes, attended with smart swelling, which extended in a short time to her ankle-joint, and that part became the most severely affected. Her parents resorted to poultices and unguents, and continued their use by alternating and changing them until the 26th of the same month; at which time, despairing of curing her themselves, I was called in, and found her foot considerably swelled and very painful, but retaining its natural colour. I learned that she was attacked late in the night with severe pain in her right foot, and also in his left hand at the same time, and that they had continued painful, and increased in swelling gradually ever since.

On examination, I found the third joint of the ring-finger of the hand affected with paronychia, which I laid open to the bone by an incision, and it soon recovered its natural integrity. The foot presented the appearance already described. I ordered blood to be taken from the arm three times, and cathartics to be used every other day—these were continued for several weeks. Blisters were also applied to the foot, and a discharge kept up by re-applying them. This treatment appeared at first to be productive of some benefit, but it was only temporary. Her foot became intolerably painful, and I was hastily called on

the 22d of August. There was no visible alteration in her foot since my last visit, except that produced by vesicating it.

I began now to despair of effecting a cure by the usual remedies, and resolved on trying acupuncture, and making known my views to my patient and her friends, and obtaining their consent, I inserted a large sewing needle into her foot, just below the ancle-joint, on the outside of it, three-fourths of an inch; the needle remained in about forty-five minutes; the pain produced by its entrance continued to increase, accompanied by a tingling sensation. This needle was used as an experiment to let her become satisfied of its utility.

The most painful and swollen part of her foot was on top of it, near the toes, to the outside of the ancle-joint, the needle being inserted at the ancle, relieved the pain previously felt there, and the swelling by the next morning; and the rest of the foot was considerably better. I visited her again on the 25th, and found her highly pleased with the success of the operation; she stated that she had slept soundly each night since the puncture was made, which was the first sound sleep she had enjoyed since her attack. I proposed inserting three needles now, to which she assented. I inserted two in the top, (half an inch in depth,) just where the first pain was felt, about an inch asunder, in an inclining position, to avoid puncturing the tendons, &c.; the third I placed in the outside of the ancle where the first had been inserted; these remained near an hour, when she said they had become too painful to bear longer; they were then withdrawn. She said the pain produced by them was greatest at the time of abstracting them, and a little afterwards; by next morning she was clear of pain, the tumefaction entirely subsided in a few days, and she resumed her usual domestic business. Thus was the affection removed in a few days, by the insertion of four needles, which had been under treatment for seven weeks.

JACKSON'S *American Practice of Medicine*.—We are happy to announce that this work is actually in the press, and its publication may be confidently expected during the winter.

HATIN'S *Compendium of Operative Midwifery*. Mr. CHARLES S. FRANCIS has recently published a translation, by Dr. TUTE, of the above useful little work.

Works preparing for Publication.—ARNOTT'S *Elements of Physics*—CAZENAVE and SCHEDEL'S *Practical Treatise on Diseases of the Skin*, translated, with notes.

THE
AMERICAN JOURNAL
OF THE
MEDICAL SCIENCES.

No. VI.—Feb. 1829.

A

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- WALTER CHANNING, M. D. *Professor of Midwifery and Legal Medicine in Harvard University, Boston.*
- N. CHAPMAN, M. D. *Professor of the Institutes and Practice of Physic and Clinical Practice in the University of Pennsylvania.*
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- ROBERT HARE, M. D. *Professor of Chemistry in the University of Pennsylvania.*
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- GEORGE HAYWARD, M. D. *of Boston.*
- THOMAS HENDERSON, M. D. *Professor of the Theory and Practice of Medicine in the Columbian College, District of Columbia.*
- WILLIAM E. HORNER, M. D. *Adjunct Professor of Anatomy in the University of Pennsylvania.*
- DAVID HOSACK, M. D. *Professor of the Institutes and Practice of Medicine in Rutgers Medical College, New York.*
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- SAMUEL JACKSON, M. D. *of Northumberland, Pennsylvania.*
- FREDERICK G. KING, M. D. *of New York.*
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- JOHN C. WARREN, M. D. *Professor of Anatomy and Surgery in Harvard University, Boston.*
- N. W. WORTHINGTON, M. D. *Professor of Materia Medica in the Columbian College, District of Columbia.*
- THOMAS H. WRIGHT, M. D. *Physician to the Baltimore Almshouse Infirmary.*

TO READERS AND CORRESPONDENTS.

TO DR. SOMERVAIL, one of the most respectable physicians of Virginia, we are indebted for a very interesting communication, which we regret came too late for the present number; it shall be inserted in our next.

DRS. GUILD and JONES's communications were also too late for the present number.

Professor DICKSON and Dr. WRIGHT's papers have just been received.

We must beg our correspondents to forward us their communications earlier when they are anxious that they should appear in the ensuing number. Punctuality in the time of publication is essential to the success of every periodical work; and as from the large edition printed of this Journal, a considerable time is required for the press-work, it has been found necessary, to prevent delay, to put it to press nearly two months before the period of publication.

The account of a case of mal-practice sent to us by our Alabama correspondent, is not exactly suited to a medical journal, it should be brought before a court of justice; the practice we do not hesitate to pronounce murderous. It is hardly within the province of a medical journal to detail instances of the mal-practice of irregular practitioners; there would be no end to disgusting details.

We thank our correspondent at York, Pa. for the case he has furnished us; it has not, however, sufficient novelty for publication.

An account of a very interesting case and dissection by Dr. HORNER, in which a lamina of medullary matter was peeled off from the whole surface of the ventricles, has been crowded out of the present number.

We have great pleasure in announcing, that it is contemplated to establish an analectic department, or supplementary Journal, to be published quarterly, and to be devoted to the most interesting memoirs read to the Royal Academy of Medicine of Paris, to the Medico-Chirurgical Societies of London and Edinburgh, to the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, and selections of those articles from the German, French, and Italian Journals, which are too long for insertion in our Periscope, and to which justice cannot be done in an analysis. The articles selected to be of permanent value, and a large proportion of them *translations made expressly for this Journal*, with notes, critical and elucidatory. The analytic department to form a complete Journal in itself, and to be published separately from the present one; but to be under the same management, with considerable additional assistance, which has already been offered. It would be premature to speak further of the plan; we however trust that it will meet with the approbation and support of the profession, to render it worthy of which no effort or expense will be spared.

We have received the following works:—

Journal des Progrès des Sciences et Institutions Médicales en Europe en Amérique, &c. Vol. XI. (in exchange.)

Annales de la Médecine Physiologique, for August and September, 1828, (in exchange.)

Revue Medicale Française et Étrangère, et Journal de Clinique de l'Hôtel Dieu, et la Charité, et des Grands Hôpitaux de Paris, from January to September, (in exchange.)

Journal Général de Médecine, de Chirurgie, et de Pharmacie Française et Étrangères, ou Recueil Périodique des Travaux de la Société de Médecine de Paris, Rédigé. Par A. N. GENDRIN, l'un de ses Membres, from January to July, 1828, (in exchange.)

Archives Générales de Médecine, for July, August, September, and October, 1828, (in exchange.)

Bulletin des Sciences Médicales, for August and September, 1828, (in exchange.)

The Edinburgh Medical and Surgical Journal for October, 1828, (in exchange.)

The London Medical and Surgical Journal for October and November, (in exchange.)

The Medico-Chirurgical Review for October, 1828, (in exchange.)

The London Medical and Physical Journal for October and November, 1828, (in exchange.)

Journal des Chirurgie und Augen Heilkundie. Herausgegeben, von C. F. V. GRAEFE, und Ph. V. WALTHER, 3d No. for 1828, (in exchange.)

Litterarische Annalen der Gesammten Heilkunde. Herausgegeben von Dr. J. F. C. HECKER, for April, May, June, July, and September.

The Boston Medical and Surgical Journal, Nos. 26 to 48, inclusive, (in exchange.)

The Transylvania Journal of Medicine and the Associate Sciences for Nov. 1828, (in exchange.)

The Western Journal of the Medical and Physical Sciences. Edited by DANIEL DRAKE, M. D. &c. for August, September, and October, (in exchange.)

The New York Medical and Physical Journal, No. 3, (in exchange.)

The North American Medical and Surgical Journal for January, 1829, (in exchange.)

Transylvania Journal of Medicine, extra. A Catalogue of Officers and Students in the Medical Department of Transylvania University, Lexington, Kentucky, January, 1829.

A Manual of the Anatomy, Physiology, and Diseases of the Eye and its appendages. By S. J. STRATFORD, Member of the Royal College of Surgeons in London, Surgeon to the Dispensary for Diseases of the Eye, and late Senior Assistant-Surgeon of the 72d, or Duke of Albany's own Highlanders. London, 1828, pp. 189, 8vo. with a plate.

Professor **PHYSICK** will find his case of Obstinate Cough cured by the Truncation of the Uvula, noticed in the *Revue Médicale*, for August, and the *Archives Générales*, for October, 1828.

Professor **CHAPMAN**'s communication on the use of Tobacco in Croup is noticed in the *Journal des Progrès*, Vol. XI.

Professor **DEWEES** will find his case of Rheumatism with Metastasis, producing Carditis, Pericarditis, Peripneumonia, and Pleuritis, and also his case of Puerperal Peritonitis, copied into the *London Medical and Surgical Journal* for November, 1828.

Professor **MOTT**'s case of Ligature of the Common Iliac, is copied into the *Journal Universel* for February, 1828, the notice of his case of Exsection of the Clavicle, into the *London Medical and Surgical Journal* for November, 1828, and his case of Femoral Aneurism of the Left Thigh, and Popliteal Aneurism of the Right Leg into the *Journal des Progrès*, Vol. XI.

Dr. **GODMAN**'s case of Dissection Wound is noticed in the *Medico-Chirurgical Review* for October, 1828, his case of Anomaly of Vision, in the *Journal Universel* for February, 1828, and his notice on the Use of the Snuff Plaster in Croup, is copied into the *London Medical and Surgical Journal* for November, 1828.

Dr. **JACKSON**'s case of Gastro-meningitis, cured by a Spontaneous Metastasis is copied into the *Journal des Progrès*, Vol. XI.

Professor **SEWALL**'s cases of Injury of the Head, with loss of substance of the Brain, are noticed in the *Journal des Progrès*, Vol. XI.

Dr. **JACKSON**'s paper on the Use of Blisters in preventing Abortion, is noticed in the *Western Journal of the Medical and Physical Sciences*.

Dr. **DRAKE**'s paper on the Respiration of Cool Air in Pulmonary Affections, is noticed in the *Medico-Chirurgical Review*, for October, 1828; in the *Western Journal of the Medical and Physical Sciences* for October, 1828; and in the *Journal des Progrès*, Vol. XI.

Dr. **ARNOLD**'s case of Paruria Erratica is noticed in the *Journal Universel* for February, 1828.

Dr. **WELLS**'s case of Scrotal Tumour is noticed in the *Journal Universel* for July, 1828.

Dr. **PENNOCK**'s Experiments on the Use of Cupping-glasses in Poisoned Wounds, is noticed in the *Medico-Chirurgical Review* for October, 1828.

Dr. **WHITE**'s case of Ligature of the Internal Iliac is noticed in the *Archives Générales* for August, 1828; in the *Journal Universel* for May, 1828; and in the *London Medical and Surgical Journal* for November, 1828.

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Dr. RODRIGUE's Experiments on Poisoned Wounds is noticed in the *Western Journal of the Medical and Physical Sciences* for October, 1828.

Dr. POWELL's case of Exsection of a portion of the Spleen is noticed in the *Journal des Progrès*, Vol. XI.

Dr. GRIFFITH's case of Salivation from the Application of Tartar Emetic Ointment is noticed in the *Journal des Progrès*, Vol. XI.

Dr. HOLCOMBE's case of Tetanus cured by Arsenic is copied into the *Journal des Progrès*, Vol. XI.

CONTENTS.

ORIGINAL COMMUNICATIONS.

ESSAYS.

ART.	PAGE.
I. An Inquiry into the Anatomical Characters of Infantile Follicular Inflammation of the Gastro-intestinal Mucous Membrane; and into its probable identity with Cholera Infantum. By William E. Horner, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania. [With a plate.]	249
II. Observations on the Effects of Heat. By Samuel Henry Dickson, M. D. Professor of the Institutes and Practice of Medicine in the Medical College of South Carolina.	262
III. Case of Amnesia. By Samuel Jackson, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.	272
IV. Reports of Cases treated in the Baltimore Alms-house Infirmary. By Thomas H. Wright, M. D. Physician to the Institution.	275
V. Clinical Reports of Cases treated in the Infirmary of the Alms-house of the City and County of Philadelphia. By Samuel Jackson, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.	289
VI. Case of Tetanus.—Respiration performed by one Lung, with Vigorous Nutrition and General Health. By Samuel Jackson, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.	321
VII. On the Diseases of the Cornea. By Isaac Hays, M. D. one of the Surgeons of the Pennsylvania Infirmary for Diseases of the Eye and Ear.	324
VIII. On the use of Iodine in several Diseases. By William M. Fahnestock, M. D.	345
IX. Case of Tracheotomy. By Zadok Howe, M. D. of Billerica, Massachusetts.	347
X. Case of Hernia Cerebri successfully treated by the Sponge Compress. By J. W. Heustis, M. D. of Alabama.	349
XI. Reports of Cases, with Observations. By Thomas Henderson, M. D. Professor of the Theory and Practice of Medicine in the Columbian College, D. C.	351
XII. On the Impropriety of Ergot in Placental Cases. By Samuel Jackson, M. D. of Northumberland, Pa.	362

MEDICAL EDUCATION AND INSTITUTIONS.

XIII. Account of La Charité at Paris. By Elisha Earlett, M. D. of Lowell, Mass.	369
---	-----

REVIEWS.

- XIV. On the Nature and Treatment of Tetanus and Hydrophobia, with some Observations on a Natural Classification of Diseases in General. By Robert Reid, M. D. Licentiate of King and Queen's College of Physicians in Dublin, Member of the Royal Society of Edinburgh, &c. &c. 377
- XV. On Difficult Cases of Parturition, and the use of the Spurred Rye. By W. Michell, Member of the Royal College of Surgeons, London. Printed for Thomas and George Underwood, Fleet street, 1828, pp. 128.
- Researches respecting the Natural History, Chemical Analysis, and Medical Virtues of the Spur or Ergot of Rye, when administered as a remedy in certain states of the Uterus, with a Coloured Engraving. By Adam Neale, M. D. Physician to his Majesty's Forces, and to his late Royal Highness, the Duke of Kent, &c. &c. London, 1828, 8vo. - - 390

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QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

PAGE.	PAGE.
1. Anomalies in the Anatomy of the Kidneys. By Dr. Bouillaud 441	5. Instance in which the Kidney was situated in the Pelvis. By Professor Heusinger - - 442
2. Rare and Remarkable Anomaly of the Vascular System. By Professor Franche - - <i>ib.</i>	6. Anatomical Description of the Anastomosis between the Glosso-pharyngian, the Trifacial and Trisplanchnique Nerves. By Dr. Jacobson - - - <i>ib.</i>
3. Insertion of the Umbilical Vein in the Right Auricle of the Heart. By Professor Mende - <i>ib.</i>	
4. Metallic Mercury found in the Human Body - - - 442	

PHYSIOLOGY.

7. State of the Heart during Pregnancy. By M. Larcher - - 442	maining entire. By M. De Fermon - - - 442
8. Cyst near the Parotid Gland, containing a Fœtus. By Professor Renner - - - <i>ib.</i>	10. On the Coagulation of the Blood. By Dr. John Davy - 443
9. Instance of Gradual Abolition of all the Senses in succession, the Intellectual Faculties re-	11. Perspiration after Death. By M. Speranza - - - <i>ib.</i>
	12. On the Condition of the Blood and Blood-vessels in Inflammation. By Dr. Kaltenbrenner - <i>ib.</i>

PATHOLOGY.

13. Case of Rupture of the Right Auricle of the Heart. By R. Rutherford, Esq. Surgeon - - 445	20. Excessive Dilatation of the Aorta, and very Enlarged state of the Heart. By D. Price, Esq. Surgeon - - - 448
14. Case of Rupture of the Left Ventricle of the Heart. By John Adams, Esq. Surgeon - - 446	21. On the Diseases of the Kidneys and Ureters. By J. Bouillaud, M. D. - - - 449
15. Notes of Two Cases of Rupture of the Left Ventricle of the Heart. By John Cross, Esq. Surgeon - - - <i>ib.</i>	22. On the Anatomical Characters of Tumours, designated by the names of Lipoma and Steatoma. By A. N. Gendrin, M. D. - 451
16. Case of Rupture of the Left Ventricle of the Heart. By G. H. Watson, Esq. - - - 447	23. Case of Amnesia. By Dr. Chailly - - - - 452
17. Case of Angina Pectoris, and Ossified Cerebral Arteries. By J. Lewis, Esq. Surgeon - <i>ib.</i>	24. Case of Rupture of the Bladder, with separation of the Symphysis Pubis - - - <i>ib.</i>
18. Case of Chronic Inflammation and Partial Ossification of the Coronary and Vertebral Arteries, producing Angina Pectoris. By H. J. Gore, Esq. Surgeon 448	25. Disease of the Stomach, in which a well-defined Perforation takes place in the Tunics of that Organ, without any softening of their Structure. By Dr. C. H. Ebermaier - - <i>ib.</i>
19. Case of Rupture of an Aneurism of the Left Vertebral Artery. By H. J. Gore - - <i>ib.</i>	26. Hemiplegia in a Child nine months old, produced by the

	PAGE.		PAGE.
Mother giving it the Breast immediately after being in a violent Rage. By Dr. Berlyn	455	28. Case of Enormous Hypertrophy of the Heart. By Dr. Johnson	455
27. Case of Polypus of the Heart. by M. Rigacci	<i>ib.</i>	29. On Tubercles. By Dr. Boulland	457

MATERIA MEDICA.

30. On the Therapeutic Properties of Morphine. By V. Bally	457	34. Experiments on the Extractum Aloes Vulgaris. By Richard Battley, Esq.	460
31. On Muriate of Ammonia. By F. L. Hunefeld	459	35. On the vinous tincture of the seeds of Colchicum Autumnale. By Professor Chelius	461
32. New Mode of Administering Quinquina. By Dr. P. Richet	460	36. On Caustic Paste. By Professor Graefe	<i>ib.</i>
33. On Chloride of Lime. By Mr. Docker	<i>ib.</i>		

PRACTICE OF MEDICINE.

37. On the Employment of Lunar Caustic in Plastic Inflammations of the Mucous Membrane of the Mouth, Nares, Throat, &c.	461	tures in Intermittents. By Dr. Robouam	462
38. Puerperal Peritonitis cured by the Application of Ice	462	43. On Poisoning. By Dr. Pallas	463
39. On Ammoniacal Sulphate of Copper in Epilepsy. By Dr. Urban	<i>ib.</i>	44. Ointment for the Reduction of Glandular Engorgements. By Professor Dupuytren	<i>ib.</i>
40. Metritis cured by Hydriodate of Potass. By Dr. Guerard	<i>ib.</i>	45. Treatment of Nymphomania. By Dr. Ozanam	<i>ib.</i>
41. Treatment of Syphilis without Mercury	<i>ib.</i>	46. On Strangury from Cantharides, and its relief. By John Davy, M. D.	<i>ib.</i>
42. On the Use of Circular Ligatures in Intermittents. By Dr. Robouam		47. On the effects of Ligature and Bleeding in cases of Poisoning. By Dr. Verniere	464
		48. On Iodine in Gout. By M. Gendrin	465

OPHTHALMOLOGY.

49. On certain methods of treating Chronic Inflammations of the Eye, lately adopted at the Royal Westminster Ophthalmic Hospital. By G. J. Guthrie	465	by the Ammoniacal Ointment. By M. Lisfranc	466
50. Amaurosis successfully treated		51. Pannus successfully Excised. By Professor Graefe	467
		52. Remedy for Opacity of the Cornea	<i>ib.</i>

SURGERY.

53. Memoir on many Cases of Luxation, in which the efforts at Reduction have been attended by very severe consequences. By M. Flaubert	467	57. Tracheotomy Successfully Performed. By Dr. Senn	471
54. Lithotriety	468	58. Actual Cautery in Osteo-sarcoma of the Lower Jaw. By Dr. Gierl	472
55. Fistula of the Parotid Duct and Gland successfully treated. By M. Beclard	470	59. Operations of Lythotomy. By M. J. M. Viricel	<i>ib.</i>
56. Staphyloraphy Successfully Performed. By Dr. Dieffenbach	471	60. Chloruret of the Oxyde of Sodium in Ulcers. By M. Williams	<i>ib.</i>
		61. On Ligatures of Ruptured Ar-	

	PAGE.		PAGE.
teries complicated with Fractures or Gun-shot Wounds. -	472	65. Case of Osteo-sarcoma of the Lower Jaw successfully removed. By James Syme, Esq. -	474
62. Fracture of the Cranium, with Depression, cured without an Operation. By Professor Graefe	<i>ib.</i>	66. Fatal Case of Depressed Fracture of the Skull, in which the Symptoms of Compression did not appear till some days after the accident. By James Wallace, Assistant Surgeon, R. N.	476
63. Case of Double Luxation of the Astragalus. By Dr. Follot -	473		
64. Case in which a Polypus of great size was removed from the Root of the Tongue by Ligature. By Richard Huie, M. D. &c. -	<i>ib.</i>		

MEDICAL JURISPRUDENCE.

67. Case of Poisoning with Belladonna - - - - -	477	69. Medico-legal Consultation, on a case of Amputation of a Thigh affected with Gangrene -	478
68. On the Tests by which Morphine may be made known in cases of Poisoning. By V. Bally	<i>ib.</i>	70. Case of Supposed Poisoning	479

CHEMISTRY.

71. Action of Brome and the Cyanate of Brome upon the Animal System. By M. Barthez -	479	72. Reduction of the Sulphuret of Arsenic. By M. Berzelius -	480
--	-----	--	-----

MISCELLANEOUS.

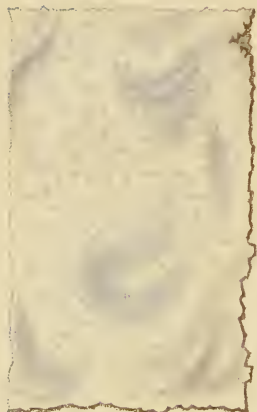
73. Constitution of the Year -	480	74. On Hydrophobia. By Dr. Suttinger - - - - -	481
--------------------------------	-----	--	-----

AMERICAN INTELLIGENCE.

Account of a Singular Spasmodic Affection of the Respiratory Organs. By R. J. Clarke, M. D. of New Orleans - - -	482	ly by tying up the Vessel. By J. Randolph, M. D. - -	489
Case of Diabetes successfully treated. By Samuel Jackson, M. D. of Northumberland -	487	On Ulceration of the Kidneys. By Professor Warren - -	491
Observations on a new preparation of Copaiva. By George W. Carpenter, of Philadelphia -	488	Transylvania University - -	<i>ib.</i>
Case of Aneurism of the External Iliac Artery, treated successful-		Dewees's Practice of Physic -	<i>ib.</i>
		Cazenave and Schedel's Synopsis of Diseases of the Skin -	<i>ib.</i>
		New Publications - - -	<i>ib.</i>
		Medical Intelligence of Georgia	<i>ib.</i>
		New Vaccine Regulation in Philadelphia - - - -	492
		Index - - - - -	433

2
x 11

1



2



3



4



295

THE
AMERICAN JOURNAL
OF THE
MEDICAL SCIENCES.

ART. I. *An Inquiry into the Anatomical Characters of Infantile Follicular Inflammation of the Gastro-intestinal Mucous Membrane; and into its probable identity with Cholera Infantum.* By WILLIAM E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania. [With a Plate.]

IT is much to be regretted that a disease so entirely American as cholera infantum, and which, from its annual recurrence and extensive prevalence, presents its facts so continually to the physicians of this country, should as yet stand in need of many expositions, to fix it upon a sure and perfect pathological foundation.

In the city of Philadelphia alone, the number of deaths under two years of age from cholera infantum, is on an average two hundred annually; on some occasions it has amounted to two hundred and thirty, and is seldom less than one hundred and seventy. Its ravages are witnessed along a space of three thousand miles, from Quebec to New Orleans, and as a general rule may be considered to increase proportionably to the approximation to the equator. I have no doubt that a bill of mortality for the United States alone, on this single disease, would exhibit thousands of victims to it annually. It is then a remarkable fact, that, from such an immense store of information, there is not one dissection a year reported to the medical public. Indeed, so completely have the pathological characters of the disease been neglected, that in hastily looking over several of the most popular American journals for the last twenty years, I have found but one dissection reported in detail.*

I have no doubt that many dissections have been performed in the mean time, indeed, they are alluded to in a general way; and

* See Coxe's Medical Museum, Vol. 3, page 94, Philadelphia, 1807, case of Cholera Infantum, &c. by James Stewart, M. D.

possibly there may be much valuable information suppressed by the reserve of its owners; but if either, or both of these cases exist, they have remained in an obscurity scarcely exceeding the precincts of a port folio, or the limited circulation of a medical coterie.

The indications of the existence of this affection, are so familiar to parents and physicians, and have been so well described by the eminent medical writers and practitioners of the United States,* that it will not be necessary to enter into a detail of symptoms, with a view of illustrating the disease which is the subject of this inquiry. It may be stated in a summary way, that the affection prevails in the summer among children of two years and under, and that the morbid phenomena resolve themselves into a strongly marked change of the alvine evacuations, which cease to be natural and well-elaborated fæces, but consist in articles of aliment discharged in very much the same state in which they were swallowed;—in the mucus of the bowels in unusual quantities, frequently tinged in places green by bile, and holding if the child have been fed on milk, (or small masses of food,) the pieces of curd or food in clusters, in the mode of their connexion resembling the spawn of frogs;—in serum in large quantities, coming either from the exhalents of the intestines, or from the muciparous glands, and augmented perhaps by the watery drinks of the patient;—and in bloody stools, which are also spoken of by writers, but are comparatively infrequent.

Dr. JACKSON† has expressed, in a very summary and striking way, as a leading indication, that the natural stools are retained, and such as are passed are derived principally from the chylopoietic viscera themselves; and that the proper fæcal smell is wanting in cholera infantum as in dysentery, being sour or putrid, or like water in which putrid meat has been washed. He also says, that some *red* portions are discharged as in true dysentery. I regret that he has here applied the name of a colour in such a way as to leave us in doubt of the substance to which it refers.

* See Medical Inquiries and Observations by Benjamin Rush, M. D. Professor &c. in the University of Pennsylvania, Vol. 2, p. 361. James Jackson, M. D. Professor of Theory and Practice of Physic in Harvard University; Remarks on the Morbid Effects of Dentition: see New England Journal of Medicine and Surgery, Vol. 1. A Treatise on the Medical and Physical Treatment of Children, by William P. Dewees, M. D. Adjunct Professor in the University of Pennsylvania, Philada. 1826. Nathaniel Chapman, M. D. Professor in the University of Pennsylvania, Manuscript Lectures. The Medical works of Edward Miller, M. D. Professor, New York, 1814.

† Loc. cit.

Other morbid phenomena are found in the frequency of those alvine discharges, which occur from three to twenty times in the course of twenty-four hours; in the want of appetite, irritability of the stomach, and vomiting; in extreme thirst; in an uneasiness, ever tempting to a change of posture; in fretfulness and quick perceptions; in frequent pulse; in fever of a remittent form disposed to evening exacerbations; in extreme emaciation and languor as the disease advances; and in delirium, coma, or hydrocephalus, in its last stages. This affection, when it leads to a fatal termination, runs its course generally in from a fortnight to six weeks. Dr. RUSH* reports a case where death ensued in twenty-four hours. The restorations to health may in like way be accomplished at any time of the disease, and there are few or no symptoms so aggravated but children have recovered from them. Among those of the most fatal kind, are stools with a pink-coloured margin,† live worms crawling from the throat, and small transparent vesicles on the chest.‡

The practitioners of the United States are as generally agreed on the anatomical characters of this affection after death, as they are on the symptoms indicating it. In common cases the brain presents no other pathological state than that of congestion of red blood; occasionally, however, the disease becomes complicated with hydrocephalus, (chronic inflammation of the arachnoidea.) The viscera of the thorax are in a sound state. In the abdomen the liver is generally enlarged, sometimes very much so, thereby occupying two-thirds of the cavity of the abdomen. It is also more firm and solid than natural, but the derangement of structure, if any exist, cannot be seen or appreciated. The gall-bladder is sometimes found distended either with bile or colourless mucus, on other occasions it is flaccid with the same kind of contents. The structure of the spleen and pancreas, continues natural.

It is evidently in the mucous coat of the alimentary canal that the true anatomical characters are found, the peritoneum being generally entirely sound. In the stomach and small intestines, especially the duodenum, red, inflamed patches, inclining to a purple, have been observed. In the large intestines, according to Dr. JACKSON and Dr. DEWEES, it is rare to discover marks of disease; in this, however, I do not agree with them. The contents of the intestines are feculent matter in hard lumps, involved in a hard adhesive mucus, and coloured either yellow or green by the bile. These feculent substances are sometimes in considerable quantity, but it is uncommon to find

* Loc. cit.

† Chapman, loc. cit.

‡ Dewees, loc. cit.

undigested matter; because the patient, in the latter stage of life, refuses all nourishment which is not in a liquid form. Dr. Dewees states that coagulable lymph is in some instances spread on the surface of the small intestines, or found in detached pieces, and in many parts their coats are thickened, so as to reduce considerably their calibre.

In some rare cases the intestines are filled with flatus, and distended much by it; in the majority of instances, however, the intestines are contracted, which is manifested during life by the collapse and diminution of the abdomen, and the wrinkling of its parietes.

Without entering into a further detail of the received anatomical characters of cholera infantum, it may then be stated that they are considered to consist in an inflammation of the mucous coat of the stomach and small intestines, rarely if ever followed by ulcerations,* and that rare as ulceration is, it is more frequent in the large than in the small intestines.

From the foregoing exposition of symptoms and of pathological changes, it is evident that the authorities who treat of this disease fix it in the mucous coat of the alimentary canal, and so far as my experience goes they have been entirely correct and happy in giving this location to it. I have, however, some reason to believe, as the subsequent cases will tend to show, that this affection is rather a follicular than an erythemoid inflammation, that it is rather a disease of the innumerable mucous glands or follicles extended from one end to the other of the alimentary canal, than a common vascular or erythemoid inflammation. With the view of presenting the grounds upon which this suggestion rests, the attention of the reader is called to the following dissections with the plates illustrating them.

CASE I.—*Follicular Inflammation of Intestinal Canal, the symptoms being those of Cholera Infantum.*

June 30th, 1828. *Autopsy eighteen hours after death.*—Present Drs. DEWEES and EDWARD JENNER COXE, attending physicians.

The infant daughter of Mr. F. aged about twenty months, has had for the last three weeks the usual symptoms of cholera infantum, manifested by eight or ten green-coloured discharges with mucus, in the twenty-four hours, but there has been no sickness of stomach. The complaint was attended with whooping-cough, but no other complication which was apparent. During the progress of her malady she

* New England Journal, ut supra, p. 118, Vol. I.

did not seem to be very ill, but last evening she died very unexpectedly to her family and physicians.

Autopsy.—Abdomen: peritoneal surface of viscera healthy: liver of a light yellow colour: gall-bladder distended with bile: spleen healthy.

Mucous membrane as follows: that of the stomach of a sienna colour, and of a consistence which permitted it to be scraped off very readily with the finger nail. On the small intestines it was generally of the same colour, but interspersed at distant intervals with patches of injected blood-vessels, but no extravasation. The clusters of muciparous glands or follicles were very distinct to the naked eye, and had their orifices also enlarged and tumid. The same condition of the muciparous follicles prevailed in the large intestines from one end to the other; but they were larger and more tumid, and gave to the mucous coat somewhat the appearance of having been sparingly sprinkled with fine white sand. In both small and large intestines the mucus seemed less consistent than usual.

The upper part of the small intestines contained yellow bile, almost pure, excepting some mixture of mucus. In the large intestines, the contents were also bilious, but greenish, like the discharges which had prevailed. There was a small blue spot on the large intestine, the colour somewhat like chronic inflammation.

The weather being sultry and oppressive, we did not extend the examination further. I carried, however, the whole of the large and a portion of the small intestine away, macerated it so as to remove the blood, and then suspended it in spirits of wine. This process has made the anatomical characters of the follicular affection much more distinct, by removing the tinge and mucus; and by floating the affected tissue, its folds and processes are kept extended and separated, and thereby give more prominence to the glands or follicles. Thousands of them, the ulceration of which was previously imperceptible, are now seen very clearly to be in that state. See Vol. I. Plate I. fig. 4th, for colour. The maceration and suspension in a fluid, has moreover brought into view several common erythemoid ulcerations on the jejunum, about two lines in diameter, and which escaped my observation entirely during the dissection. They are so different in size and appearance from the ulceration and tumefaction of the follicular system of the intestine, that they could not be mistaken for them, and the contrast in the drawing must be very evident. See Plate III. fig. 3d.

An observation worthy of consideration in this case, is, that yellow bile was in the jejunum, but green in the colon. The inquiry result-

ing from it, is what produced this change of colour? We know, that frequently in cholera, the alvine discharges are in a state of fermentation, and are sour; is this process confined to the colon? if so, the rationale is, that the bile retains its natural character in the small intestines, but becomes green in the large, from meeting there with acescent matters made so by fermentation. See Plate III. fig. 4, for a representation of a section of the colon, and fig. 3, for a portion of jejunum. The preparations are in the Anatomical Museum, Colon, A. 102-8; Jejunum, A. 102-9.

CASE II.—*Follicular Inflammation of Intestinal Canal, the Symptoms being those of Cholera Infantum.*

September 2d, 1828. *Autopsy, within twenty-four hours after death.*—A coloured female child, aged eighteen weeks, has been ill at least a fortnight, and probably more, from cholera infantum; the date, however, could not be ascertained precisely from the mother, owing to her imperfect intelligence and ill health. The child, during its illness, had convulsions, which is by no means an uncommon symptom in the last stages of cholera. Within a few days she has taken refuge in the infirmary of the Alms-house, bringing with her the infant alluded to; and a twin of the same age, having an affection of the same kind and date. The subject of the present observation died last evening, and this afternoon I made the examination, in presence of the resident students of the house: thermometer 77°. The attending physician, to whose care the infant had been confided, Dr. John K. Mitchell, was absent.

Autopsy.—Exterior aspect: no perceptible putrefaction; considerable emaciation.

Abdomen.—Stomach empty, contracted; mucous coat, of a light sienna colour, almost white, and destitute of blood-vessels, excepting a very few; the rugæ well marked, laid for the most part in longitudinal rows, and so elevated that they were in contact. The mucous coat was also so soft that it could be scraped away easily, in the form of a pulp, with the finger nail.

The small intestines likewise of a light sienna colour on their mucous coat, and empty, excepting a little mucus, which was here and there greenish. The large intestines presented the same colour as the small, and were destitute of fæces; in place of the latter, the two inferior thirds of the colon were occupied, so as to form a slight distention, with pure pus of a cream colour, proper consistence, as well elaborated as I ever saw, and destitute of any excepting a very faint odour. The muciparous glands of the colon were

all enlarged, so as to represent small grains of white sand sprinkled over the mucous membrane, and about the size of millet seed; there was in each a little depression of a darker colour than the rest of the gland, and, from its position at the apex, was taken for the orifice of the gland. The muciparous glands of the small intestines were also tumid and irritated, but could not be so well distinguished at the time of examination as they were subsequently, by maceration. In a few of these follicles, ulceration had begun to show itself, in both intestines, small and great, but only to an inconsiderable extent. Maceration in this case also being resorted to, both the tumefaction of the glands and their ulcerations were made more distinct by it, for the reasons stated.

The liver was healthy, but its colour was lighter than usual, and somewhat variegated by a yellowish ground, being interspersed with its natural brown. The gall-bladder was distended with inspissated green bile.

The other viscera of the abdomen were healthy, as well as the peritoneal coat. The thorax and head were not examined by myself. The preparation of the colon is deposited in the Anatomical Museum, A. 102-10. See Plate III. fig. 2d.

After what has been stated in these two cases, on the consistence of the mucous coat of the stomach, it becomes a very interesting object of inquiry, whether this was a normal or a morbid state of its texture. I am as yet deficient in those facts from personal observation, which would enable me to assign some standard of consistence to the mucous coat of the stomach under two years of age. I have, however, no doubt that it is much softer at that period of life than it is in the adult, and the probability is that from being so soft as to be readily scraped off with the finger nail in the early months of existence, it then increases successively and gradually in its consistence as one advances into old age, and until it becomes a membrane of sufficient tenacity to permit very readily its being dissected up as such with a scalpel. This subject is, however, quite open to inquirers, especially in this country, and sound conclusions upon it made by multiplied observations, would confer a great benefit upon the profession.

CASE III.—*Follicular Inflammation of Intestines with Cholera Infantum.*

September 7th, 1828.—The twin child alluded to in the preceding case, after having languished under the same disease with similar symptoms, died, and was examined to-day.

The mucous coat of the stomach was in a natural state. The duodenum contained healthy bile, and the other small intestines abounded in fæcal matter, of a light yellow colour. There was also fæcal matter in the cœcum, of a light yellow, and chopped appearance, but none in any other portion of the large intestines.

The muciparous glands of the cœcum were very obviously enlarged, as also those of the sigmoid flexure of the colon, and of the rectum. A mucous inflammation was seen on the lower portion of the ileum, and there was a considerable injection of the rectum, apparently of an inflammatory kind.

The appearance of the liver was healthy.

The facts of the last case were communicated to me by Dr. Ashmead of the Alms-house Infirmary, who has now for some years distinguished himself there by a devoted attention to its scientific and charitable objects, and by a ready co-operation in the inquiries of the prescribing physicians and surgeons.

CASE IV.—"Maria Boulefray, aged ten months, head large, considerable embonpoint, pale complexion, skin soft and flaccid, died February 5th, 1824, after an illness of six days; during which she was somewhat comatose, had no fever, no pain, very frequent vomiting, incessant alvine discharges; rejected pap, (bouillie,) and the breast of her mother. The stools were first yellow; they then became white, frothy, inodorous, of a glairy consistence, slightly ropy, and without tenacity. The body was opened ten hours after death.

Head.—Serosity effused in the cranium; cerebral convolutions almost effaced; substance of the brain infirm; arachnoid membrane injected; middle and lateral ventricles distended by a considerable quantity of serosity.

The larynx and chest in a sound state.

Abdomen not distended; peritoneum dry, and without effusion into its cavity. Exteriorly the intestinal convolutions were white, and only a few small blood-vessels, not much divided, were seen to creep under the serous coat.

The stomach being empty, was in a middle state, between dilatation and contraction. The mucous membrane was of a natural thickness, sufficiently adherent to the subjacent membrane, of a milky-whiteness, and was moistened by a proper quantity of clear, ropy mucus. The villousities were very distinct on the great curvature, and scarcely perceptible elsewhere; the cardia and the pylorus had nothing remarkable, *but all the extent of the mucous surface was covered with a prodigious number of white granulations, the size of*

a millet seed, indiscriminately scattered over the gastric surface, which presented no marks of inflammation.

The antrum pylori, (espace pylori-valvulaire,) was sound, and covered with small glands, like the stomach. A similar follicular development had occurred in the duodenum; the valvulæ conniventes did not yet overlap, as in the adult; there were glands on the summits of these valves, as well as in their intervals. From the beginning of the jejunum to the middle of the ileum, the internal membrane retaining a white satin colour, sufficiently villous, and of an ordinary thickness, was covered with granulations of an appearance and size similar to those of the duodenum. From the inferior third of the ileum to the valve of Bauhin, there was a white, frothy fluid, tinged yellow, without a particular odour, having almost the liquidity of water, and filling the entire cavity of the intestinal tube. Besides the granulations generally scattered upon this part of the intestine, there were groups of follicles united in small masses, and in elliptical plates, which all occupied the curvature of the intestine. They were bordered by a winding, colourless line; their surface was rough, and surmounted by glands, similar to those which existed alone in the environs of the plates; mucous folds extended from one gland to another. The plates generally were four lines wide, and half an inch long. In the ileo-cæcal region they were very near one another. The different glands which existed alone on the mucous surface, offered for the most part at their summit, a grayish point, indicating their excretory orifice.

In the whole length of the large intestine, down to the rectum, and even the anus, these glands were found in abundance. The colon contained frothy, yellow matter, similar to that of the small intestines.

The mouth, the pharynx, and the œsophagus presented a similar development of follicles.

The intestinal mucous membrane was detached with difficulty; but at the end of eight days of maceration in water, a large shred could be peeled off. The plates and the granulations came off with it, being as it were, incrustrated in it."

Mr. Billard,* from whom this observation is translated, continues his remarks in stating that we may conclude that there was here an unnatural development of the muciparous glands, from their being much more numerous than they are in the healthy state. It may also be remarked that the membrane was not inflamed, that the intestinal tube contained a prodigious quantity of liquid matters almost aque-

* De la Membrane Muqueuse Gastro-intestinale, p. 422, Paris, 1825.
No. VI.—Feb. 1829.

ous, and which seemed to constitute what is called the mucous flux; and that in fine, the young patient, though dead in a short time, had not presented very evident febrile symptoms.

It is evident to the American reader, that this case of Mr. Billard's, had it occurred in this country, would have been named, and is, in fact, the cholera infantum. The paucity of his observations prevented him from recognising in it the anatomical characters of the disease; for he says the follicles probably are not developed by inflammation, for the membrane upon the surface of which they manifest themselves, offers none of the characters of inflammation laid down in a former part of his work. The difficulty with Mr. B. however, comes from his not making a sufficient allowance for the difference between the erythemoid or common vascular inflammation, and the follicular irritation of the intestinal tube. In the three observations by myself, the indications of erythemoid inflammation are seen to be either absent or defective.

Strange as the assertion or rather suggestion may appear, I am inclined to the opinion, that if this follicular inflammation be the primary or essential affection in cholera infantum, cases may, and indeed do occur, where the diarrhœa is wanting; and where perhaps the most striking symptom is convulsions, no doubt arising from the sympathetic irritation of the brain. The following case, at least, where the anatomical characters after death were the same as in the cholera infantum, will go to show how far this notion is supported by facts.

CASE V.—Follicular Inflammation of the Colon with Convulsions.

Examination about twenty-four hours after death.—Present Dr. HAYS, attending physician, and Mr. THEODORE DEWEES, student of medicine.

Miss P. aged two years, for about three weeks had been disposed to constipation, requiring the use of cathartics frequently. She was attended by Dr. Dewees, who informs us that her stools had been white with an absence of bile. Eight hours before her death she was suddenly seized with convulsions which lasted to the end of life.

Autopsy. Jan. 9th, 1828.—Exterior aspect, nothing unusual.

Head.—Brain and membranes natural.

Thorax.—Lungs natural; half an ounce of straw-coloured, transparent serum in the right pleura.

Abdomen.—Peritoneum healthy; liver hard and of a yellowish hue; stomach of usual thickness; its mucous membrane could be scraped off with the finger nail, and was of a pearl or sienna colour, interspersed every few lines with small specks of blood of a light pink

colour, and not larger than the head of a very small pin; the mucous membrane was also smeared all over with a coat of tenacious mucus, and at the left end of the stomach was of a light gamboge colour, which I attributed to bile dying it.

The intestines were distended with flatus and of a light pearl colour. Nothing pathological could be detected in the small ones, but in the large, all the muciparous follicles from one end to the other seemed to be affected. These follicles were converted into small cysts of the transparency and size of the itch vesicle, and on being punctured with a needle and pressed, readily gave out their transparent fluid. Their orifices could be seen very readily with the assistance of a lens, and appeared to be closed generally, but some were open and slightly ulcerated; neither could a distinction of colour be observed between these orifices and the remainder of the gland. See Plate III. fig. 1, (*Anat. Museum*, A. 102-7.)

I have now adduced a sufficiency of evidence to excite an inquiry, and perhaps to lead to the conclusion, that cholera infantum is pathologically a follicular inflammation of the intestinal tube, attended with increased peristaltic motion in most cases, but not in all; and in its extreme stages, existing in various sympathies of the different organs of the body. In its anatomical characters at least, it has a very strong resemblance with the vesicular diseases of the skin, and in its extreme stages it seems to progress from the interior to the exterior of the body, showing itself in the mouth by inflammation of the mucous follicles there, (aphthæ,) and on the skin by an irritation of its follicular system, the appearance of which has been compared by Dr. Dewees to the vesicles which would be produced by an immense number of minute drops of scalding water.*

The disease seldom becomes fatal until the sympathies with other organs are well established, and the indications of their irritation be strongly marked by disordered circulation, incessant vomiting, coma and convulsions, all of which show the lesion of the organs presiding over the great functions of circulation, digestion, sensitiveness, and myotility. It is under the advanced stages of the cholera that the meningeal inflammation of the brain, (hydrocephalus,) is evolved; the sympathetic affection being converted from one of mere irritation of the arachnoidea, into a pathological change of structure followed by effusion.

Follicular inflammation of the intestines sometimes appears in the eleventh year; the following case will prove it.

* *Op. Cit.* p. 398.

CASE VI.—*Follicular Intestinal Inflammation.*

May 17th, 1824.—“Louis Joui, aged eleven years, of an infirm constitution, but having a certain degree of embonpoint, being thrown from his horse, his skull was fractured, and he died the next day, in the hospital. It could not be ascertained whether he was labouring under a diarrhœa at the time, or not.

Autopsy, eighteen hours after death.—The fracture of the skull was found extended to the base, and there was much effusion. The lungs were sound, with some ancient adhesions to the thorax.

Abdomen.—Peritoneum sound, the intestines thin and transparent. The mucous membrane of the stomach was of a rose colour, wrinkled, and covered with a thick layer of mucosity. By scraping it, a number of red points became visible, and it contained some bread and the skins of stewed apples.

The antrum pylori was long, yellowish, and marked with a great number of small, grayish spots. The mucous villousities were well marked there; the duodenum, and the remainder of the small intestinal tube, was the seat, in places, of a very fine ramiform injection. In the inferior third of the ileum, was a cluster of twelve lumbrici worms. The large intestine was healthy, and contained a great quantity of fluid matter, which was yellow, frothy, and moderately odorous; at the end of the colon, the fæces had a consistence sufficiently firm.

In the whole extent of the intestinal mucous membrane, was a great number of muciparous glands. They were extremely numerous on the duodenum, and occupied both the valves and their intervals. They all had the size of the head of a pin, and exhibited very visibly their excretory orifice. In the jejunum they were more rare, but they reappeared in great numbers on the ileum, and united themselves in little masses, and by plates. The cœcum was covered with those glands; at the end of the transverse colon they became more rare, and none existed in the sigmoid flexure, nor in the rectum.”*

Mr. Billard goes on to remark that the state of this intestinal tube is entirely analogous to most of those opened by Rœderer and Wagler.†

There was evidently here an abundant mucous flux, a remarkable whiteness of the mucous membrane, and a marked development of the muciparous glands. Nevertheless, this infant did not die from

* Billard, ex. op. cit. p. 420.

† De Morb. Mucos. Paris, 1810. I regret not having been able to obtain this book in the United States. It alludes to an epidemic which prevailed in Gœttingen, the violence of which seems to have exploded on the intestinal canal, according to the allusions which I have seen concerning it.

the affection; it appears even that he was not incommoded by it during life, so far as to require repose and care, inasmuch as he received while working, the wound which caused his death in so short a time.

There are certain diseases considered as contagious, one of the remarkable peculiarities of which is, that when once individuals have gone through them, the charm is dissolved, and they are forever afterwards innoxious. Another circumstance worthy of remark is, that these diseases have their primary seat in the follicular system, as for example the small-pox and the chicken-pox. They appear occasionally under such doubtful causes, that the opinion may be reasonably entertained of their spontaneous production, in the localities where they appear from time to time. Have we not then mistaken too frequently this peculiarity of disposition in the organism to fall into certain morbid conditions, for distant sources of contagion; for a power in disease as an essential existence to propagate itself, like plants or animals, by its seeds, as they are ridiculously called? May not cholera infantum, as a follicular disease of the intestines, be the inevitable lot of every individual of the human family, but under circumstances of various severity, being mild, scarcely perceptible in some, and in others being aggravated by the season of the year, by the local circumstances of the individual, and by his early infancy? May not, in fact, the whole follicular system of the body be successively under the necessity, in most individuals, of undergoing inflammation, the symptoms of which will of course vary, according to the functions of the part in which the follicles are placed, and give rise apparently to diseases having no external analogies? As for example, in the inherent follicular inflammations of the skin, we have what is called small-pox, from its vesicular or bladder-like appearance;—in the inherent inflammations of the follicles of the intestines, we have what is called a cholera or flux of children, because the bowels are continually expelling their contents, being too irritable in most cases to retain them; and is it not perfectly consistent with the laws of induction, that when a similar innate inflammation attacks the follicles of the trachea and lungs, we shall of course have symptoms suited to the organs assailed? In fact, what is whooping-cough but an ingenerate inflammation of the mucous follicles of the air passages, manifested by the immense transparent mucous discharges, which are brought up by the tea-cupful after a fit of spasmodic coughing? May not then the theory of contagion rest upon the explanatory fact, that till the ingenerate diseases of the follicular system have been gone through, the individual is liable to have them excited by such individuals as are labouring under a similar affection?

ART. II. *Observations on the Effects of Heat*. By SAMUEL HENRY DICKSON, M. D. Professor of the Institutes and Practice of Medicine in the Medical College of South Carolina.

THE effects of heat upon the human constitution have formed the subject of many an ingenious essay. It would seem that very intense degrees of it may be borne for a short period with entire impunity at the time, and so far as has been traced without any after consequences of importance. Besides the experiments of BLAGDEN, TILLET, &c. &c. which are in the hands of every body, the Journals of the day are teeming with the exploits of a M. MARTINEZ,* who seems to be gifted with powers of endurance similar, if not equal, to those of the fabled salamander. But although these transient exposures have been undergone in the instances alluded to with so little inconvenience, it is nevertheless, perfectly well known that the long-continued application of high degrees of temperature, will not fail to derange every function of the human system, and will ultimately effect its destruction. These evils may be brought about in various ways, according to the circumstances under which the heat is applied, the concurring agents which may, at the same time, affect the constitution, and the predispositions and idiosyncrasies of the individual subjected to their influence.

The morbid effects of heat have been divided into the direct and indirect. I shall confine myself at present to the former, proposing to offer a few brief practical remarks. Concerning the latter, we have some ingenious and useful observations from the pen of Dr. JAMES JOHNSON, who seems to have watched the diseases of hot climates with a most careful and accurate eye, to have delineated their progress with a faithful and ready pen, and to have reflected upon their causes, history, and effects, with a philosophical and generally correct judgment. On the approach of spring, in our climate, when the thermometer, (Fahrenheit's,) steadily shows a temperature of atmosphere in cool, shady, and sheltered places about 76°, the heat of the exposed streets, subject as they are, to both radiated and reflected heat, may be safely assumed to rise above 90°, ranging, perhaps, as high as 100° or 110°.

The earlier influences of this season would seem to be mildly stimulating, urging to a quicker and freer play of the several functions, and a more perfect development of animal as well as vegetable life.

* See London Medical Gazette, for July 12th, 1828.

The skin becomes soft and relaxed; the heart beats with rather greater force, and fills the extreme vessels with a fuller tide. The fluids of the body are not exempt from the ordinary law of expansion by increment of temperature, and soon come to occupy a larger space. Hence, if the relaxation of the vascular system does not keep pace with this expansion, then is built up a tendency to various hæmorrhages from rupture by over-distention. Epistaxis is now common, and the menstrual secretion is apt to be poured out in a quantity rather greater than during the past winter. If hæmorrhagy does not take place, a train of other consequences arise, which deserve our special notice. Of these, the principal is head-ache, attended with violent pulsation of the carotids, and productive of great distress. The determination to the brain, and the pressure made upon every part of this organ, will occasion restlessness, alternating with heavy drowsiness; a remarkable and oppressive languor; an indisposition to an incapacity for muscular exertion; almost complete anorexia, with frequent nausea—(all dyspeptics suffer at this season more than at any other.) Constipation follows, and a disposition is formed to visceral obstructions of varied character, destined to be more perfectly developed by the poisonous influence of the malaria of the coming autumn. To obviate these unpleasant symptoms, the lancet is a common resort with many, while others prefer the employment of certain cathartics, hence referred to under the general phrase of spring physic. Either of these means, as experience has fully proved, is capable of giving a notable share of relief, but it would not seem to me a matter of entire indifference, whether we make choice of the one or the other, and I will endeavour to give reason for my preference of the cathartic here.

The lancet seems directly indicated under these circumstances by the immediate relief afforded to head-ache, &c. by the bleedings from the nose, so common at this period. Every physician is familiar with the remark that hæmorrhage from any set of vessels, leaves behind it when it ceases or is checked, the tendency to its own recurrence, a tendency so strong, as in some instances, to become a matter of absolute necessity, and to constitute a portion of the habits of the constitution. All hæmorrhages, when they proceed to any considerable amount, are apt to occasion morbid determination to the head. This fact, which has been demonstrated by repeated experiment, may easily be proved. The most violent epileptic convulsions often follow, as I have myself seen the recovery from a state of syncope in persons not epileptic, who have been bleed to fainting. And how can it be otherwise? The blood within the triangular sinuses of the brain,

or rather its membranes, upon whatever principles the ordinary and general venous circulation may be explained to go on, must be admitted to be dependent for its onward motion, on account of the impossibility of any degree of contraction of these vessels, either upon the vis a tergo, communicated to the column of arterial blood by the systole of the left ventricle, or as I rather believe, upon the suction exerted on the venous columns by the diastole or expansion of the right side of the heart. In either case, the effect will be precisely the same. The heart ceasing to beat, or beating feebly, the venous column of blood is checked in its downward flow, or flows slowly and languidly, while the cerebral arteries empty themselves into these vessels by their elasticity and tonicity, qualities not readily affected by the state of the system alluded to. The result must evidently be an accumulation of blood in the veins and sinuses, a dangerous distention of these vessels, and an undue pressure exerted upon the surface, and within the substance of the brain. Now it seems to me a reasonable doubt whether this condition, although it may often be recovered from, and to all appearances perfectly, can be renewed and repeated from time to time, and we know that the artificial will become a matter of as necessary habit as the natural hæmorrhage, without the most serious injury to the parts concerned. Will not the vessels become more and more liable to rupture from this repeated distention? Will the brain continue capable of returning at once, and readily, to the performance of its most important and most delicate functions, after repeated interruptions of this nature? I should believe that there could be no difference of opinion as to the proper answer to these inquiries. The cathartic is free from all such objections, and exhibits also another collateral advantage, which must not be overlooked. The red globules of the blood seem to contain much of the stimulant quality which this fluid is known to possess. It is also perfectly well understood that when lost, they are replaced very slowly; their source is unknown, but wherever manufactured, the supply is only adequate to the ordinary demands of the system, and by no means keeps pace with any unlooked for draught. Pale and serous blood does not excite the organs of circulation to the proper degree, nor does it rouse sufficiently the peculiar organic sensibility of the several glands and secreting vessels. The functions of the system are hence all performed languidly; even the muscles lose their contractile power, and their firmness becoming soft, as in blanchéd veal, and locomotion is difficult and fatiguing. The cathartic procures a separation from the blood of the fluid parts, less indispensable, and more easily reproduced; and by the quantity of secretions which it occa-

sions to be poured out by the exhalents of the intestinal surface, empties the vessels no less effectually, leaving behind the pabulum vitæ, the fibrine, and cruor; besides that, in one of these cases, the determination *created* by the remedy, is to the head, and in the other, to a less delicate part, the intestinal canal. It is evident too, that we shall gain much by a judicious selection of the cathartic proper to be employed, taking into due consideration the indications presented. If there be a necessity for prompt evacuation, the neutral salts are ready and active, or a combination of some one of them with a resinous purgative, (as rhubarb,) may perhaps prove still more effectual. Complete and permanent relief is however best gained by a persevering use of aloetics, rather than of any others of the class, perhaps by the irritation which they occasion in the lower intestines, and the consequent determination of blood to the hæmorrhoidal vessels, the distention of which seems to be in itself, though painful perhaps, and full of inconvenience, yet productive of no consequences ultimately injurious to the constitution, and appears to relieve notably the cerebral vessels.

But there are, I think, measures by which a prevention of these evil effects of heat may be attained, and a resort to medicine rendered unnecessary. With this view I would advise a considerable reduction of the ordinary winter diet as soon as the weather becomes warm. Vegetable aliment should be almost exclusively taken, as being abundantly nutritious, yet comparatively free from stimulant power. It is a common error to throw off the winter clothing too early and to make too absolute a change in the dress. This should be carefully avoided, as rapid and impressive alterations of temperature frequently occur in spring; if then the skin becomes constricted, and the increased amount of perspiratory exudation is suddenly checked, the blood must be determined injuriously to the internal viscera. A centrifugal tendency is given to the fluids by the circumstances of the season; we should be careful that our habits should not in any manner oppose themselves to this. I am disposed, from attentive observation, also to recommend the use of ice and of iced water, during the heats of spring and early summer. Cold applied thus I look upon as one of the most effectual as well as grateful of our tonics—doing away the feeling of vacuity and oppression at the stomach, so well known to the unhappy dyspeptic, and occasionally felt perhaps by every one—relieving all the other irregular sensations of internal heat and irritation, and proving abundantly diaphoretic. Indeed, I know not a more prompt and certain sudorific, whe-

ther in health or disease, than a draught of water as cold as it can be taken.

I am not unaware of the generally received opinion of the dangers attending the use of such cold water when the body is heated. I have before me at this moment the treatises of RUSH and CURRIE upon the diseases occasioned by drinking cold water in warm weather. I might content myself by referring to the important discrepancies in their statements and their reasonings upon the subject; the first attributing to the strong contrast or shock all the effects detailed; the latter, whose reasonings are more full and ingenious, yet still not altogether satisfactory, ascribing them to a debilitating power exerted on bodies already weakened by fatigue and sweating. After due consideration of the facts stated by both, we must come I think, to the conclusion, that some condition or circumstance essential to the production of the evils detailed, has been overlooked or omitted by both; that is to say, that the death in the single case noted by Currie, and in the similar cases quoted by him from other authors, and the deaths and symptoms recorded by Rush, were not occasioned *simply* by the drinking cold water, either when very hot, or while cooling after having been much heated. It is to be observed that I do not doubt or deny the danger of applying cold to the *surface* when in a relaxed state. On this point I fully agree with Currie—but this is foreign to our present discussion. I have never seen a death from drinking cold water, nor have I been able to obtain any authentic account of such an event having occurred since I have been engaged in the practice of medicine in this city. Yet here, if any where, such accidents should occur. Immense quantities of ice and iced fluids are daily consumed here, by persons subjected to the several conditions set down both by Rush and Currie as calculated to favour the morbid influence of the agent in the highest degree.

I cannot infer positively from Rush's statement that he himself saw and prescribed for any of the cases he alludes to. I believe them to have been generally cases of insolation, and that being sensible of rapidly approaching disease, and at the same time feeling thirst and internal heat, the patients were just procuring relief when overtaken by sudden death. I know of no examinations made of such bodies after death, but entertain no doubt that they would be found for the most part, if not always instances of apoplexy.

In July, 1823, a carpenter, a mulatto, while at work near the top of a house, felt himself giddy and ill. He came down as hastily as he could, grasped at some water, drank it eagerly, and fell down senseless and without motion. The water had been kept in the build-

ing some time, and was of the warmth of the air or very little below it—about 80° of Fahrenheit. This fellow was bled, &c. and recovered, and now lives hemiplegic. Many persons who were speculating about him when I saw him first, and who universally attributed the attack to the water he drank, were much puzzled by its high temperature, the coincidence would have been satisfactory, though entirely deceptive, had it been *cold* well or spring water. Rush tells us that punch, beer, and even toddy, when drunken under the same circumstances as cold water, have all been known to produce the same morbid and fatal effects. This I readily believe, and may further affirm that most of the cases in which there was even the slightest colour of suspicion, attached to the swallowing of cold drinks as the cause of the attack, toddy or punch and not water had been the medium employed. Yet I must not be understood to say that all instances of this nature occur exclusively among the intemperate; they are chiefly of such, yet exceptions are now and then met with.

Few summers pass without exhibiting in our city cases of the kind above alluded to under the title of insolation. Exposure to great heat is of itself undoubtedly capable of stimulating the heart to violent action, and by chemical expansion of the fluids contained within the vessels, as well as by morbid excitement of the vital powers, occasioning the ill effects included among the several forms of apoplexy—the sudden deaths attributed in common phraseology to “stroke of the sun,” (*coup de soleil*)—and when acting in rather less intensity, giving rise to phrenitis, vertigo and severe head-aches, inflammatory fever.

The month of June, 1824, set in pleasantly cool; on the 8th and 9th however, Fahrenheit’s thermometer rose to 88° and 89°. After this there was a prevalence for some time of easterly winds, without rain, during which the temperature was as low, (on the 19th,) as 76°. From the 22d of the month the winds were steadily from the south-west and west, and the atmosphere dry and cloudless. The heat regularly increased, the thermometer rising every day to 90° or near it, until the 29th, when it was at 94°; on the 30th it was above 98° at 3 P. M. in my piazza, which was well sheltered from the sun. When hung under a tree in the street and in the shade, it rose to 103°, being protected also, as far as might be, from reflected heat; it rose as high as 130° when exposed directly to the sun and to reflection from the earth. These excessive heats however declined from this time. On the 1st of July it was 94° at 11 A. M. which, contrary to what usually occurs, was the hottest hour of that day. It ranged about 90° until the 7th, when we had a severe storm of rain, wind, and hail.

Our CHALMERS, with his usual good sense remarks, that “by keeping a thermometer in the shade only, we discover no more than the greatest *coolness* in the air, but it in nowise points out that degree of heat which those sustain who are obliged to be much abroad in the day.” And it is with these latter, our chief if not exclusive concern must be under these circumstances, in a medical point of view.

The greatest heat which Chalmers noted here was in 1752, during which year the thermometer rose in May to 93°, in June to 92°, in July to 101°, and in August to 96°. Dr. LINING declares the weather to have been warmer in 1738 than he ever knew it in Charleston. In the beginning of August, the thermometer, he says, rose for some days successively to 98° in the shaded air, at or about 2 o'clock in the afternoon; the rest of the summer he tells us was more temperate. On this occasion, we are informed, “several persons died of apoplexies.”

It is probable that the summer of 1752 was somewhat more distinguished for its high degrees of heat than even the remarkable one of 1824, as it was undoubtedly for the long continuance of this elevated temperature. Yet certain circumstances must be allowed for, which, when duly considered, will lessen somewhat the apparent disparity. Dr. Chalmers resided, as I am informed in the alley, which, until its widening a few years since, bore his name. Somewhat crooked, it was not wide enough to allow of free ventilation, yet, under our almost vertical sun was not shaded; of course, with so much reflection of heat, and a stagnation of air, there must have been in this residence a concentration or accumulation of heat above that of the opener streets of the city.

The statement given of the thermometrical observations, for 1824, was taken either in rooms on the ground-floor, well shaded and ventilated, or in my piazza; positions cooler by two or three degrees than any other parts of my house, and cooler, it would appear, than almost any part of the city. We have no register of the thermometer, so far as I am aware, taken out of Charleston, S. C. during the past century. In 1824, we know it to have been as high, at Watterborough, as 105°, and in Columbia, Cheraw, and several other places, as 103° and 104°, in the shaded air. It is singular that this writer, (Chalmers,) though usually minute as well as accurate, does not speak of any particular effects of the heat of 1752, while LINING tells us of several deaths from apoplexy, in 1738, a more temperate season. James Johnson rates the general heat of the East Indian summer, at from 80 to 100°, (Fahr.) The sirocco, it is said, raises the thermometer, on the Italian shores of the Mediterranean, to 112°, for

days together; the effects of this heated air upon the subjects of its influence, are great depression of spirits, and prostration of the digestive powers, "so that persons who venture to eat a hearty supper are often found dead next morning."

During the continuance of the hot weather of 1824, as described above, many sudden deaths occurred in our city, which may be with propriety spoken of under the general head of insolation, *coup de soleil*. Of this affection there are many degrees of violence and intensity, from slight vertigo, languor, and nausea, to instant death, so immediate as not to allow of any kind of assistance.

I would, however, divide the cases into two classes, which may be clearly and obviously separated from each other. They might be distinguished by the terms apoplectic and phrenitic, or, following the phraseology of SERRES, cerebral and meningeal; the first probably depending on or occasioned by venous congestion in the brain, the prominent symptoms being those produced by mere pressure, either vascular or extra-vascular. The latter consisting in arterial determination and fulness. I must state with great regret that it was not permitted me to verify the pathology here given, by an examination of appearances *post mortem*; but a description of the two sets of cases will, I think, suffice to establish the reasonableness of the distinctions laid down.

The apoplectic form usual occurred in persons somewhat advanced in years, of the make so well known as offering a predisposition to such an attack: corpulent, with short neck, &c. They fell, after exercise and exposure, senseless and motionless. The breathing was stertorous; the pupil of the eye insensible to light; the skin usually as hot, but no hotter, than the natural standard; the pulse full and slow. Unless very speedy assistance was brought, death ensued in an hour or two. If sense and motion were, by the application of proper means, restored, it was observed that one side was more or less affected permanently, and the patient, if he recovered, recovered hemiplegic.

Phrenitic and meningeal insolation was far less fatal than the form which has been described. It occurred in younger people, and was often more clearly the immediate consequence of recent intemperance in the use of ardent spirits. These fell at first without sense or motion, but became after a while very restless, tossing their limbs, and groaning much. The breathing was not always stertorous; the pulse generally quick and hard, the face flushed, the eyes red, the skin pungently hot. If timely aid was procured, a large proportion of them recovered. When aroused from their stupor, they would

be found to be delirious, occasionally in a state of furious mania, attacking those about them, or alarmed and calling loudly for help. They ultimately recovered, if they got well without paralysis. In both forms great paleness of the face, and feebleness of the pulse sometimes occurred, and were signs of the most extreme danger. In both, the eyes were at first insensible to light: I did not notice that the pupil was *regularly* contracted or dilated in either; being in both conditions in each form of the attack.

Little need be said of the treatment instituted. The lancet was of course much employed. In the apoplectic form, the pulse being full and slow, there can be no objection to moderate bleeding; one obvious caution should, however, be attended to. In a state of absolute syncope, or a very near approach to it, the sinuses and veins of the brain must be of necessity overcharged with blood, which cannot enter the cavities of the heart, now quiescent or nearly inactive. If we believe with many physiologists, that the suction-power of the right side gives an onward motion to the blood in the veins, we must perceive that while the cerebral arteries, by their tonicity and elasticity, are pressing forward their contents, the sinuses, which from their form and structure cannot exert any such agency, must be filled and distended, detaining the blood in the smaller veins which empty into them. If, with others, we believe the venous blood to be driven forward by a *vis a tergo*, the apparent difficulty and danger are little if at all lessened. Respiration being laboured and slow, the blood does not readily reach the left side of the heart; the partial current which attains that ventricle is sent into the arteries, which pass it onwards, oppressing more and more the nervous system, denied relief by the clogged and full condition of the pulmonary vessels and right side of the heart. The pressure upon the brain then, by blood within the veins, must be greatest just when syncope takes place. I have already mentioned the convulsions, quasi epileptic, under these circumstances, in individuals free from that dreadful disease, and in watching apoplectics while bleeding from an open vein, I have satisfied myself that this was the precise moment of the supervention of paralysis; probably the precise moment of the rupture of some overcharged and burthened vessel, and the substitution of extra-vascular for intra-vascular pressure: the latter always hopeful and remediable, and comparatively innocent; the former invariably injurious and in the highest degree dangerous to life, if not absolutely an irremediable evil.

In the meningeal or phrenitic I did not in the first instance employ

the lancet.* All that could be hoped for from this useful instrument at this period was as perfectly, easily and surely effected by cold affusions. He who has not learned the efficacy of this simple remedy in cerebral affections, generally may add an important agent to his list. The patient being raised to a sitting posture, cold water should be poured from the height of a few feet upon his head. The flushed face will become pale, the hard, quick pulse will sink to a mere thread, and the coma and stupor will rapidly subside. Again and again the symptoms returning will call for a repetition of the affusion. I saw in one day five persons in the situation above described, three of whom recovered entirely under this simple means of cure. If the recovery was not thus complete, and mania and phrenitis supervened, the cases were for the most part manageable, but now a free use of the lancet became necessary, and purgatives of the *most active* power were demanded. The number of deaths from apoplexy and insolation, (for the caption is thus separated in our bills of mortality,) were, in 1824, no less than thirty-four, adding those under the head of "sudden death;" among adults, almost demonstrably attributable to the same causes, four; gives us an aggregate of thirty-eight.

The nearest approach to this large number was in 1823; the amount however being much less—it was twenty-five. In 1822 it was but eleven. In 1827, the weather being hot, not more than fourteen.

Such as have been detailed are some of the primary and more immediate effects of the application of high atmospheric temperatures to the system. Heat expands the fluids, and stimulates the solids. It is a natural consequence of this latter influence, that after a time a general relaxation of the system should ensue. The functions are performed with less vigour, the vital powers lose somewhat of their energy, and a universal languor pervades the animal frame. The appetite is less keen, the digestion slower and less perfect, and often attended with perceptible degrees of febrile irritation. The secretions from the intestinal mucous surfaces, as from the external surface of the body, are poured out in greater abundance than at other times; hence diarrhœa, cholera, simple dysentery; dyspeptics suffer much, and all are occasionally dyspeptics. The least intemperance in eating, or improper indulgence, being followed by greater or less gastric disorder.

But winter comes at last to give tone to the relaxed solids, to con-

* Inflammatory action cannot instantly commence, though its ultimate super-vention is to be dreaded and expected. Loss of blood is no prevention of inflammation, (which comes on as readily in the weak as in the strong,) although the most important of our means of cure.

dense the expanded fluids, to invigorate the mind and the body. For these changes we are gradually and imperceptibly prepared. The cool nights, and foggy mornings of autumn, which become so dangerous from careless exposure, by gentle and repeated shocks entice us to the use of more guarded clothing, remind us to close our windows and doors against the ingress of their chilling and damp air, and at last, on the approach of frost, we are found drawn round the evening fireside, and enveloped in woollen garments.

Let the poet sing of the monotonous charms of his ever-during spring; the philosopher and the physiologist cannot cease to admire the wisdom which instituted the system of perpetual change, and which gave all nature to exult in, and revive by those very contrasts of condition, which to the eye of a careless observer appear harsh and shocking to her.

ART. III.—*Case of Amnesia*. By SAMUEL JACKSON, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.

PHYSIOLOGY and pathology lend a mutual aid in advancing their progress. Physiological facts, by establishing the natural or healthy structure and functions of our organs, instruct us in their morbid condition, and indicate the methods by which it is to be repaired. Pathological facts, accurately observed and clearly detailed, enlighten us on the physiological state of our organs, and tend to the elucidation of their offices when they are unknown. It has been correctly observed, that pathological facts are experiments performed by nature, and when they are comprehended, are less liable to deception, than those proceeding from the violent means required by art. It must, however, be acknowledged that disease is so seldom confined to a single organ, especially when, in an apparatus of organs, they are grouped together in a small space, that it is difficult to avoid falling into error, and not to confound the results of one organ with what actually belongs to another.

Our knowledge of the encephalic organs is wanting in speciality; general conclusions have been arrived at, through the medium of experiments, of pathological observations, and the study of individual peculiarities. In this way it is known that they are the seats or organs of the intellectual faculties; of sensation; of locomotion; and the expressions; and the general location of these functions is determin-

ed with some accuracy. It is a question yet to be decided, whether the intellectual and moral faculties have for their various modifications distinct organs, or have the brain as a common organ in which the different faculties may be displayed. This question is to be mainly resolved, it is most probable, by a careful attention to the intellectual phenomena in a morbid state. In this view, the following case, it appears to me, is deserving to be placed on record.

The Rev. Mr. R. the subject of this case, is aged forty-eight years; he is of the sanguine temperament, ruddy complexion, light-coloured hair and eyes, and has lately manifested a strong tendency to obesity; his health for many years has been excellent; he is not subject to head-ache, or to any nervous symptoms. His intellectual faculties are of a high order, but have not been as actively employed as formerly, and he has experienced some mental anxiety: his temper is placid, with a disposition bordering on gaiety.

On the 5th of September last, early in the morning, he awoke with head-ache, after a restless night. He had, the preceding evening, been exposed to the night air, which had lowered in temperature, and perspiration, which was usually copious, received a sudden check. He took some castor oil, which acted freely in a short time, after which he again laid down. About eleven o'clock, the Rev. Mr. H. who resides in the same dwelling, went into his room to inquire respecting his health, and was surprised to find Mr. R. could not answer his questions. Alarmed at this circumstance, he immediately requested me to visit Mr. R.

I found my patient in bed, evidently in the full possession of his senses, but incapable of uttering a word. I examined the tongue, and ascertained it was not paralysed, but could be moved in every direction. All my questions were perfectly comprehended, and answered by signs; and it could be plainly seen, by the smile on the countenance, after many ineffectual attempts to express his ideas, that he was himself surprised and somewhat amused at his peculiar situation.

The face at this time was flushed, the pulse full and somewhat slow, and to my inquiries if he suffered pain in the head, he pointed to the front of his forehead as its seat.

I directed hot water to be brought in a bucket, for a pediluvium, and made preparations to draw blood. Mr. R. exhibited at this time a strong desire to speak, and, after a great many ineffectual efforts, endeavoured to make me comprehend his meaning by signs. Finding I could not understand him, he made a sign that he would write. When furnished with pen and paper, he attempted to convey his

meaning, but I saw he could not recall words, and that he had written an unintelligible phrase: it was "Didoes doe the doe."

Forty ounces of blood were drawn from the arm, and before the operation was completed, speech was restored, though a difficulty continued as to the names of things, which could not be recalled. The bleeding and pediluvium produced some faintness, and he was placed in bed.

The loss of speech appearing to recur again, in fifteen minutes, ten ounces more of blood were abstracted, and sinapisms applied to the arms, legs, and thighs, alternately: the skin became moist and the head-ache was relieved.

Mr. R. now communicated to me, that when he made the attempt to write, he had intended to inform me he had already used a foot bath, and I might see the floor still wet, where the water had been spilt.

The sleep that night was disturbed by uneasiness and throbbing in the head, which disappeared in the course of the 6th, and no further return of the affection has occurred.

In an analysis of this case, we are presented with the following facts: 1st. Sudden suppression of the cutaneous transpiration, succeeded by cerebral irritation and determination of blood to the brain; 2d. frontal pain immediately over the eyes; 3d. perfect integrity of the sensations and voluntary movements; 4th. the general operations of the intellect undisturbed; ideas formed, combined and compared; those of things, of events, of time, recalled without difficulty; 5th. loss of language, or of the faculty of conveying ideas by words, though not by signs: this defect was not confined to spoken language, but also extended to written language.

The inferences to be drawn from these facts, are, 1st, that as the cerebral irritation produced no general affection or disturbance of the functions of the brain, it was local or limited; and 2d, as loss of language was the only functional derangement of the intellectual faculties, that faculty must have been connected with the portion of the brain, the seat of the irritation; and 3d, that an organ of language exists in the brain. This case lends a strong confirmation to the general truth of the doctrines of Phrenology.

ART. IV. *Reports of Cases treated in the Baltimore Alms-house Infirmary.* By THOMAS H. WRIGHT, M. D. Physician to the Institution.

IT has been occasionally noticed by writers on dropsy, that there sometimes occurred in such cases, a termination by sudden death, when the cases did not exhibit any thing on which the presumption of such an event, at the time, could be rested. The instances of sudden death in dropsical cases, have been remarked to occur much more frequently in the hydrothoracic form of effusion than in general dropsy, with ascites and anasarca predominating, and it has been further remarked that sudden death not only often ensued to dropsies, which were running a course that could not be controlled by medical management, but that the same event had sometimes intervened most unexpectedly shortly after an apparent cure of dropsy, (particularly of the hydrothoracic species,) and when the patients seemed to be making rapid progress in convalescence.

It has been attempted to explain this untoward accident, by presuming the existence of such eventual accumulation of fluid, either in the pericardium or sacs of the pleura pulmonalis, as by pressure, to overwhelm the contractile energy of the heart, or from the same cause, to extinguish the capacity of the lungs for expansion necessary to life; in either way, causing death by a species of suffocation.

It is certainly possible that in one, or both the modes suggested, the general and pulmonary circulation, as well as the function of respiration, may have been sometimes fatally embarrassed in advanced dropsy. But it is by no means clear, how such a cause of embarrassment should be suddenly fatal, as from its mode of action, it must necessarily be gradual in its effect, and most probably attended by certain premonitions of its tendency, some time antecedent to the decisive result. Such a cause, moreover, seems very little fitted to explain the occasion of sudden death, in those cases where it has ensued after the signs of dropsy have been removed so far as to permit nearly complete relief to all the functions which had been impaired or impeded by the previous disease.

The pathology just referred to—namely, fatal pressure on the heart or lungs by accumulated fluid, has been considered unsatisfactory, and insufficient to explain the phenomenon which it proposed to solve. A different rationale has been founded, partly on analogy with the cause of sudden death in some other forms of disease, and

partly on facts occasionally disclosed by dissection in some suddenly fatal cases of dropsy. Ossification of the valves of the heart, (at the root of the great trunks,) or of the coronary arteries, has been found in some such cases, and a general argument has been deduced from those cases of the same, or some other state of degenerescence of the great organ of circulation, as the true cause of the abrupt termination of the functions of life during the course of dropsy, or soon after its apparent removal.

The inference here attempted to be established on analogy, or on the degeneration of structure noticed in a few instances, is not well sustained as the only, or even the common cause of the incident to which it is applied. Such degeneration may be, and probably is, often associated with dropsy, (especially hydrothorax,) occurring in advanced life; perhaps a similar morbid state of the main instruments of circulation is sometimes the immediate or efficient cause of dropsy itself ensuing in old age. But dropsy is a disease of all periods of life, and is well known to owe its existence to conditions of the system, and derangements of certain organs and functions, which derangements, there is no reason to suppose, were in any degree the consequence of positive defect or permanent change of structure, either in the principal organ, or other part of the vascular system. The common fault of a part of the circulating system, to which dropsy in its various forms is consequent, is error of action, not vice of structure. There is not necessarily associated with dropsy, in the general, such impair of any of the constituent textures, as to prevent ultimate restitution of health, with complete and perfect integrity of all the organization and functions; and no reason can be derived from the nature of dropsy why it may not go to a fatal issue without sensible organic lesion, or any other final cause of that event than a change of action and ultimate loss of natural office in a particular function or set of functions, indispensable to life. It is known, that from whatever impulse the tendency to hydropic action may have been devolved on the serous tissues, it is finally to derangement and loss of function in the instruments of elaboration and nutrition, we are to look for the general and usual cause of death in dropsy. In such cases, actions of waste predominate over those of repair, in a constantly increasing inverse ratio. An extensive set of instruments, the capillary series of exhalation, intended naturally to elaborate from the circulating mass, a proportion fitted to maintain the equipoise of the whole, to prevent congestions, and preserve a particular condition of contiguous parts are forced into excess, and perhaps in some

degree change of action, by which they make an undue demand on the general stock of the material of alimentation,* and finally involve the constitution in serious or fatal difficulties, both by the general impoverishment, and the incumbrance devolved on important organs, by the amount of deposit eventually accumulated under the continued state of super-excretion, or what may perhaps not improperly be termed a kind of universal serous extravasation. Ossification or other structural transformation in the heart, valves, or tunics of the great vessels, may be casually present in some hydropic cases, and may involve liability to sudden death in the course of the disease. But such complication is accidental, and comparatively rare, and numerous instances of sudden death have occurred from dropsy, in which no deviation from natural structure could be found in any part of the vascular system.

In the advanced and mature stages of dropsy, when the powers of the constitution begin to fail seriously under the accumulating embarrassments of the disease, and the fatal crisis is near at hand, it frequently happens that the functions of the brain betray the most prominent form of oppression and danger. Symptoms of cerebral congestion arise; a tendency to stupor comes on; or complete coma ensues, simulating very much the common signs of apoplectic invasion. This state of the sensorium may arise from more than one cause. Either the hydropic action may have been assumed by the delicate serous tissue of the brain, and the sensorial functions be overwhelmed by effusion, or what perhaps is more usually the case, the appearances of apoplectic disorder result from sympathy of the brain with the failing office of respiration. Serous engorgement of the lungs—anasarca pulmonum, is often the ultimate consequence of hydrothorax, and of geneal dropsy fully matured, and pervading all the serous and cellular textures. This state of the lungs embarrasses the pulmonary circulation, and unfits the lungs themselves for that office of elaboration which is indispensable to the healthy excitement

* The vitiated or effete state of the blood in advanced dropsy is not mainly dependent on the drain of its watery parts by exhalation, for its aqueous constituent generally superabounds in proportion to the duration and maturity of the disease. It is of course, to imperfection in the digestive economy, we must refer the altered constitution and obvious impoverishment of blood in confirmed and chronic dropsy. An altered state or office of some of the organs devoted to this function, may have been a primary occasion of the dropsical diathesis, or the digestive organs may have fallen into error and disability during the progress of dropsy, developed from causes originally invading the health of other systems.

of the whole system, and the defect of which is felt first and most sensibly in the vital economy of the brain. The bronchial tubes and cells being loaded by effusion, and encumbered by interstitial deposit, gradual suffocation results, preceded by abolition of sense, coma, &c. from diminution of sensorial and vital energy in the brain and nervous system, which diminution will be then in the direct ratio of the imperfection or inefficiency of the function of respiration.*

The symptoms of cerebral congestion in dropsy, a short time antecedent to death, have been also sometimes referred to a species of mechanical impediment of the cerebral circulation. It is supposed that in consequence of the failing power of the heart, and almost extinguished play of the lungs, together with the encumbrance of excessive serous infiltration, the venous return circulation of the head may undergo a kind of stasis, or be greatly retarded; that the sinuses of the brain hence become engorged, and the functions of the organ extinguished by congestion and pressure. Some truth, perhaps, mingles with the mere conjecture, on which this pathology rests in the general. The venous, as well as the arterial system, is commonly very greatly impoverished in advanced chronic dropsy, and a nearly equal balance of those systems is usually preserved. But in dropsies of rapid development, occurring in constitutions plethoric and robust, where the excitement is tumultuous, tending to early loss of balance in the systems; to local determinations, and sudden collapse, in such instances, and only in such instances, strongly-marked symptoms of congestion, may perhaps admit the illustration which the theory contemplates.

The following case supplies a satisfactory explanation of one of the causes of sudden death, ensuing to hydrothorax, after the signs proper to that form of dropsy were no longer perceptible, and when the case seemed to have put on the character of decided convalescence.

* Reference is here made to that somewhat sudden extinction of sense and motion, with stupor, &c. which occasionally ensues to dropsy at its maximum of evolution; a state usually preceded by laborious and imperfect breathing, with that livid hue of face and skin, which tells distinctly of disabled pulmonary circulation and its consequences. It is this state, of which the defective sensorial excitement alluded to, is supposed to be consequent or concomitant. There is still a third mode, (besides cerebral effusion or pulmonary engorgement,) in which the rather sudden failure of the sensorial functions may occur in mature dropsy, namely, that mode in which the same functions commonly give way in almost all forms of protracted disease, approximating their fatal crisis: a state of collapse and positive exhaustion.

CASE I.—*Hydrothorax, Partial Ascites, and great Infiltration of the Lower Extremities.*—Charles O'Neal, labourer, aged forty-seven, was admitted into the Baltimore Alms-house Infirmary, June 20th, 1827. The symptoms of thoracic and general dropsy had commenced four months antecedent to admission, and were consequent on cold, fatigue, and long exposure to wet, in the laborious occupation of ditching, at which he had been employed the greater part of the preceding winter. The difficulty of breathing was now great, with inability to lie down; cough inconsiderable, slight fever, no acute pain, bowels torpid, and urine scanty.

This patient was put on the use of a bitter cathartic infusion—gentian, senna, supertartrite of potash, and aromatics—which kept the bowels freely soluble, and increased the secretion of urine, but without sensible alleviation of the symptoms of hydrothorax. The breathing continued anxious, difficult, and crepitating, and the inability to lie down for more than a few moments, remained as at first. The infusion was continued, with the addition of a diuretic compound: tinct. digitalis, ol. terebinth. and spt. nit. exhibited along with the cathartic draught. The purgative and diuretic effects of the combination were very considerable, and both the ascites and anasarca were greatly reduced. No favourable impression, however, was made on the hydrothoracic affection, and the agents hitherto employed were laid aside. The after-treatment consisted of a liberal use of solution of cream of tartar sweetened with molasses, in a draught of which was occasionally exhibited the following diuretic compound, fecula of elaterium, two grains, tinct. scill. and oxymel colchici, each half an ounce, in four ounces of solution of acetate of potash; dose, two to three drachms, pro re nata. The salutary operation of those agents soon became manifest, and was very explicit. In five or six days after adopting the latter course, the respiration became easy, measured, deep, and inaudible, having lost all crepitation. The breast was also now more distinctly resonant to percussion, and recumbency was practicable without inconvenience.

It was about the first of August, six weeks after admission, that the propitious circumstances just recorded occurred, and gave such indications of amendment, as seemed to remove all cause of apprehension for the present. On entering the infirmary, sixth of August, it gave me great pleasure to notice this patient, dressed and sitting on his bed, with a countenance strongly expressive of the ease and comfort of his present feelings, contrasted with his distress for many weeks preceding. His remarks were full of confidence in his agree-

able sensations, and exultation at the prospect of prompt and perfect recovery. Two hours after leaving the infirmary, I was called to return there in haste, on information that O'Neal had been seized with a fit. In a few minutes from his attack I was at his bedside, and he was without a sign of life.

I was at a loss to account for the catastrophe in this case, and my conjectures hesitated between the presumption of lesion in the brain, or sudden extinction of the heart's action, from concentrated dropsy of the pericardium.

Dissection, a few hours after death.—The head was first examined. The dura mater presented nothing uncommon, except a degree of humidity, greater than occurs in the natural state; the proper tunics of the brain were also overspread by a very sensible quantity of thin serous fluid, constituting a remarkable dampness of the surface, rather than any positive collection of fluid, though the amount much exceeded the natural halitus with which the parts are bedewed. There was some degree of engorgement of the superficial sinuses of the brain, but no mark of inflammation of the tunics. Cutting away the medullary substance cautiously down to the lateral ventricles, they were found very much enlarged, as if recently greatly distended, but were at this time quite empty. On prosecuting the dissection below the level of the tentorium, the fourth ventricle, the head of the medulla spinalis and whole base of the brain were inundated by water, which, when the head was depressed, flowed out to amount of five or six ounces.

On referring now to the enlarged and empty state of the lateral ventricles, it seemed apparent that the fluid found upon the base of the brain had been first accumulated in the lateral ventricles; had remained there for an uncertain time without serious consequences, and at last by forcing the valvular defence, and the pulpy closure of the passage leading to the fourth ventricle, had dropped suddenly upon that cavity, and by rupture of the ventricle, (at its thin, inferior surface,) was effused upon the medulla oblongata, and into the spinal canal. Pressure to a great degree thus suddenly made on the origin of the most important nerves of organic life, seems fully adequate to explain the total extinction of sensorial function with the nearly instant death that ensued in the case of this patient. In the thorax, the sacs of the pleuræ, and the pericardium, there was very little effusion; nor was there any obvious morbid state of the heart itself, or about the origin of the great vessels.

The circumstances attending this case, its mode of termination,

and the facts disclosed by examination, tending to render that mode of termination intelligible, all seem to point to a certain inference in the present, and in relation to similar cases. They lead to the conclusion, that in dropsical disease, while effusion is going on in the serous and cellular textures of the great cavities and general body, a similar result may obtain in the delicate ventricular tissues of the brain, and especially of the greater or lateral ventricles.* It seems probable also, that this partial hydrocephalic state may remain inoperative for a time, perhaps in some instances a long time, until from quantity and gravitation, or some shock causing its irruption, it may suddenly inundate the base of the brain, and produce instant death, by invading the seat and suppressing the function of the most important nerves. The event in contemplation may occur at some stage of progressive dropsy, or may ensue at various intervals subsequent to apparent removal of the general hydropic state; for it is probable, from many facts and analogies, that hydrocephalic accumulations are seldom removed, or diminished by absorption.†

CASE II.—*Dropsy.* A young man aged twenty-seven, by occupation a stage driver, had been for more than a year in ill health, with indications of hydrothorax, and tendency to general dropsy. His countenance was pallid, abdomen somewhat tumid, and lower extremities infiltrated. There was also cough, quick and laboured breathing, especially on exertion, and that wheezing or crepitating sound in respiration, so characteristic of serous extravasation into the bronchial tubulous, and pulmonary cellular structure.

A long course of purgative and diuretic agents, in combination

* It is the suggestion of some eminent anatomists, (the Bell's,) that the plexus choroides is almost entirely a web of vessels destined to the secretion of a fine serum or halitus. If this opinion be well founded, it may explain why great serous accumulation is more generally found occupying the lateral ventricles than the other cavities of the brain, as only a very faint appearance of choroid plexus can be discovered in the other ventricles.

† A surmise of absorption has been founded on some examinations of the head, in which previous hydrocephalic collection was inferred from certain indications in the state of the membranes and ventricles, though there was no longer sensible effusion. Yet the long period, sometimes years, for which the water of hydrocephalus is known to have remained unabsorbed, taken in connexion with the fact, that cases attended by unequivocal signs of matured hydrocephalus, are very generally fatal sooner or later, places the presumption of absorption to an extent sufficient to relieve dropsy of the brain, on ground of doubtful authority and difficult admission.

with the tonic bitters, had greatly improved the general health of this patient, yet some embarrassment of respiration remained, and a faint rattle in breathing continued also audible. In January, 1827, after an interval of much better health than usual, this man, while making some exertion to attach his horses to the carriage, became faint, dropped to the ground, and expired immediately, without the least apparent violence or struggle.

On careful examination of this subject a few hours after the accident, it was rendered strongly presumable that death had been caused by sudden descent of water from the lateral ventricles, upon the fourth ventricle, with effusion upon the base of the brain generally, and head of the spinal marrow. The lateral ventricles were dilated and empty, and the inferior cavities of the head inundated by fluid to the amount of three, perhaps four ounces. No degeneration or disease appeared about the heart or great vessels.

CASE III.—*Anasarca and Ascites.* William Tarring, aged twenty-six, was admitted into the Baltimore Alms-house, September 17th, 1827. This was an aggravated case of general dropsy, uncomplicated however by hydrothorax. Abdomen extremely prominent and tense; upper and lower extremities greatly œdematous; countenance eminently leucophlegmatic; great debility; breathing short but clear, without mark of bronchial effusion; no cough and absence of fever. The dropsical affection had existed some weeks prior to admission, and was consequent on severe remittent fever, contracted in August, while working on the Harrisburg canal.

The excessive tension of the abdomen in this case prevented any satisfactory examination, by taxis, of the great viscera of the belly, the liver, spleen, &c.; but from the patient's report of having been in good health previous to the attack of remittent fever, on which the dropsy was consequent, and from the absence of any representation of serious hepatic derangement in the complexion, the tongue, excretions, &c. of the patient, the case was presumed to be free of any actual organic impairment. Some degree of primary visceral congestion, high and continued tumult and effort of vascular action, with more or less irritation and disorder of the gastro-hepatic functions, and proportionate exhaustion ensuing to those joint causes of disturbance, seemed to have led on rapidly to hydropic effusion, with the disabled and oppressed state of the system which the case presented on admission.

The usual remedies of dropsy, (omitting in great part mercurial combination,) were employed in the case as freely as circumstances

would permit. An infusion of gentian, senna, supertartrate of potash, and aromatics was given liberally, with powders of squill, nitre, and digitalis; Dover's anodyne being added to the powder exhibited at night. The patient was also directed the free use of barley water, acidulated with cream of tartar, and rendered moderately cordial by gin. Under this treatment both the bowels and kidneys performed their appropriate function with as much activity as was desirable; the tension of the belly was gradually taken off, and the overloaded cellular tissue became relieved. The evacuation of the dropsical effusion went on slowly but constantly, and by the careful regulation of the medicines, with due alimentary support, the patient was free of oppression, and somewhat recruited in strength by the end of the fifth week after admission. This man became able to leave his bed, and walk the infirmary hall every day for some hours, eating with appetite his whole allowance of food. During this promising state of convalescence, Tarring was attacked in a season of wet weather, late in October, by quotidian intermittent fever, for which bark and aromatics were given freely, and the paroxysms were interrupted after the third period. But the patient was a good deal worsted by the attack, was confined to bed by debility, and in a few days subsequent to arrest of the intermittent paroxysms, dropsical effusion began to display itself in the extremities. In a week after he was almost as much affected by ascites and anasarca, as when first admitted.

The remedies successful in the first instance were tried again, more sparingly however in quantity; but their good effect was not so considerable as formerly, the action of the absorbents, of the kidneys, and of the bowels, being much less efficient; and after a longer perseverance in the medicines than had been necessary to effect improvement in the first instance, the amount of effusion remained undiminished, while the energies of the constitution had gradually declined.

The medicinal agents were then changed; good Lima bark with an aromatic was ordered, and the patient directed a liberal use of the cream of tartar punch, with the addition three or four times in twenty-four hours of two drachms of a diuretic combination before noticed; namely, fæcula of elaterium four grains, in four ounces of solution of acetate of potash, adding tinct. of squill and oxymel of colchicum.

This plan of treatment, with light cordial nourishment as freely as could be taken, gave a better aspect to the case. The urine augmented very much, the alvine evacuations became copious and watery, the tension every where relaxed gradually, and the forces of

the circulation rallied to the natural tone as the oppression was taken off. Early in December the signs of dropsy were a second time dissipated, and the youth of the patient, in connexion with a naturally good constitution, encouraged the expectation of permanent convalescence. Nothing occurred to defeat the presumption of perfect recovery in this case until the 20th of December. The man had been about all day, and on that evening had eaten a hearty supper, and seemed as well and comfortable as for some time before. An hour after supper the nurse of the ward was called to Tarring, by a patient in an adjacent bed, who observed him fall suddenly into a state of unusual agitation and disorder. She found him with limbs rigid; oppressed, stertorous respiration; and in a state of insensibility from which he could not be roused. He expired in a few minutes.

From circumstances which rendered autopsic examination inconvenient at the time, the direct cause of sudden death in this case was not ascertained. But from the marked analogy in the manner of Tarring's death, with previous fatal instances under like general circumstances, where serous extravasation was found to have occurred in the basis cerebri and medulla oblongata, the issue of his case was referred to a similar cause. The period of life in this case was much against the probability of organic degenerescence of structure about the organ of circulation; and the presumption of serous, cardiac, or pulmonic infiltrations was equally opposed by the non-existence of even the slightest hydrothoracic symptoms at any period of the dropsical affection.

The following case, though unlike the preceding from the total absence of all the external characters of dropsy, may serve to illustrate by analogy, the mode of suddenly fatal termination, sometimes occurring in the course or at the close of that disease: an event which the antecedent histories were designed to refer to its probably most common cause. The present case has points of interest in other respects also, which seem to render it worthy of recital.

CASE IV.—*Ulcer of the Leg.* Thomas Coursey, a black man, aged seventy-four, of very large frame of body, and apparently great original vigour of constitution, was admitted into the Baltimore Alms-house in September, 1827. This man was in good general health when admitted, yet was disabled from work partly by age, but more from disease of the left inferior extremity. The motion of the left knee-joint was entirely lost, in consequence of severe contusion of the part received thirty years before. From the man's account, arthritis to a great degree had ensued to the injury in the first instance, followed by profuse sup-

puration, great distention, and ultimate relaxation of the synovial membrane, articular and capsular ligaments, and finally spontaneous subluxation, outward and backward, of the head of the tibia, which, becoming permanent, caused a very curious and rare species of deformity.

Besides the distortion and ankylosis of the knee-joint, the leg was overspread by a large and deep ulcer of the chronic indolent class, which had commenced simultaneously with, or very soon after the injury of the knee, thirty years past, and had never healed. The surface of ulceration was altogether, at the patient's admission into the infirmary, about ten inches in extent, suppurating profusely, and from its seat, appearance, and duration, had probably long since involved a diseased state of the periosteum and bone. The man's general health being good, nothing further was directed in his case than rest and such local treatment as was indicated by the state of the ulcer, namely, cleanliness, and dressings fitted to maintain, as far as possible, a healthy state of the suppurating surface. From the man's age, the character and duration of the ulcer, its complete closure or cicatrization was not contemplated or deemed probable.

This man remained well for three months succeeding his admission, evincing no proclivity to any form of serious or constitutional disease; his spirits, appetite, and personal appearance were all perfectly well maintained. The ulcer of the leg during this time had undergone, as was expected, scarcely any sensible change, other than the clean appearance and absence of irritation, which frequent and regular dressing, with continued rest, would almost necessarily produce; its dimensions were but little diminished. Late in December, however, a sudden and remarkable alteration was displayed in its character. It commenced a course of rapid healing, and in ten days from the time the change was first noticed, the whole original space of the ulcer was covered in, and cicatrized very smoothly, leaving only a central point a few lines broad, which furnished a partial suppuration.*

No obvious difference in the patient's general health attended this sudden healing of the ulcer, but a very prominent change was manifested in the man's temper and moral habits. He became peevish, quarrelsome, and indocile in his conduct, averse to keep in his place or

* A man named Lafito, who had been long a dresser in the house, and formerly, as he represents, in the same capacity in the Philadelphia Alms-house, remarked, while exhibiting the great change in the state of Coursey's leg, "that the man had not long to live:" an idea of danger from the sudden healing of old ulcers not always realized, yet far from being altogether a vulgar notion or groundless prejudice.

put up with his accommodations in the ward, and very impatient of admonition or control. His language and manners betrayed nothing of derangement of intellect, properly so called, yet his fretful, unquiet state, and improper manner of speaking, rendered it at last necessary to remove him from the ward to one of the cells, where he was kept alone, but without any personal constraint. This was done in the second week after the healing of the ulcer, and on the day following his removal to the cell, Coursey was visited by the superintendant of the institution, who found him apparently well as usual, but as before, very much disposed to rude and passionate complaints, which he indulged to a great degree on the present occasion. In a few minutes after the visit of the superintendant, the keeper of the cells came to report that Coursey had fallen down in a fit and died instantly.

Examination, four hours after death.—The dura mater exhibited nothing uncommon, except an unusual blanched appearance, and was without marks of inflammation or of vascular engorgement. The proper tunics of the brain presented a natural condition, or were in no other manner altered in character than by excess of humidity, and the same blanched or sodden appearance observed about the dura mater.* This humid and bloodless appearance was obvious in the successive portions of the medullary matter, removed in penetrating by sections down to the lateral ventricles. When those cavities were arrived at and carefully opened, they presented the most extraordinary degree of enlargement I have ever witnessed. The ventricles were penetrated at the posterior horn, and were found empty; but on enlarging the incision, and lifting the thin covering which had been left them in removing the cerebral mass above, the ventricles presented rather the appearance of caverns than cavities in the brain, seeming capable of receiving a body of considerable size, (as a small orange or lemon,) and of space sufficient to contain several ounces of fluid. On being fully exposed, the delicate tunic reflected around the ventricles, was of highly florid colour throughout, from minute vascular engorgement, while the plexus choroides was a good deal wasted, and altogether colourless, not easily distinguishable, and much resembling a gelatinous mass. The valvula cerebri, (of VIEUS-

* The convolutions of the cerebrum were much deeper, and more readily and widely separable from each other on this subject than I had ever noticed them in any other instance. In all those fissures, and to a great depth between the convolutions might be seen bundles of vessels running in straight lines, or stretched across the interspaces, and all those vascular fasciculi, (the deep arteries and veins of the pia mater,) of high colour, and very much engorged.

SEXs,) could not, from distention of parts, be recognised; the aqueduct of SYLVIVS was very much dilated, and from its commencement down into the fourth ventricle, was filled with water; as was also the fourth ventricle, the whole space around the base of the brain and head of the spinal marrow; the same fluid gravitating freely into the vertebral canal. The quantity of water poured out of the inferior cavities and space of the brain, and of the upper vertebral cavity, exceeded six ounces; its colour was slightly red, and it was somewhat viscous or albuminous to the feel when rubbed between the fingers.*

In this case, circumstances warrant the presumption that the great quantity of water found occupying all the lower cavities and space of the head, was originally produced in, and for some time confined to the lateral ventricles, from whence it descended, probably suddenly, into the fourth ventricle, (which was ruptured inferiorly,) and thus became effused and free as it was found on dissection. The cavern-like enlargement of the lateral ventricles indicated great distention by previous accumulation of fluid.

The dissection was not prosecuted further, as the state of the encephalon was considered fully illustrative of the cause of sudden death; and during the life of the patient, the economy and functions of all the viscera of both cavities of the trunk were perfectly well maintained, and singularly free from every mark indicative of organic embarrassment.

The phenomena arising towards the close, and concurring in the termination of this case, viewed in connexion with the direct cause of that termination revealed by dissection, bear a seeming intimate relation to two points of physiology. They tend to illustrate the liability and mode of sudden death from large collections of water in the upper cavities of the brain, and serve in the present case forcibly to call to mind the ancient and much-controverted doctrine of the metastatic attribute of disease. A doctrine fruitful of medico-scholastic dispute, which, after various fortune, and a period of protracted dormancy, has been revived under the light of better science, and become a good deal the favourite of modern pathology.† Can we

* The commissura mollis, so seldom to be found, that its existence has been questioned by some eminent anatomists, was very distinct in this case. It was of pale, yellowish-gray colour, semi-translucent, about the size of a writing quill, standing as a bridle across the thalam. nerv. opt. under the fornix. Mr. Bell is probably right in saying that the commissura mollis is best seen in hydrocephalic brains. I have not discovered it plainly in any other.

† In substituting the metastasis of morbid actions for the original notion of a translocation of morbid matter, or the migration of disease in its limited and literal sense,

allow ourselves the inference in the case before us, that the sudden healing of an extensive ulcer of thirty years standing, was concerned in the change represented to have taken place at that time in the patient's conduct and manners, and that the moral effect in question resulted from physical irritation devolved on the encephalon? Can we further presume, on legitimate metastatic principles, that the sudden suppression of habitual suppurative action over an extensive surface on the leg, might give occasion to that excitement to serous exhalation into the cavities of the brain, the product of which was so prominently obvious in this patient's case.

Regarding it as a curious fact, that a rapid and apparently sound closure of an extensive ulcer of thirty years continuance should have occurred, where I felt assured that the subjacent bone had suffered degeneration, probably in a great degree, I caused a portion of tibia to be cut out, and subjected to maceration for a sufficient time to free the bone of all soft matter. When this was effected, and the bone dried, the seat and extent of the ulcer was found very clearly and strongly defined on the tibia. There existed a very peculiar change, which the surface of bone, corresponding to the ulcer, had undergone, which was not caries or necrosis in any of their forms; the bone was firm and solid over its whole extent, but a singular state of granular and scabrous roughness occupied the space of bone answering to the seat of the ulcer. There existed, in fact, for some inches on the face of the tibia a dense crop of exostoses of various form and dimensions, some of the miliary character, and small size; others, orbicular or pisiform, of considerable magnitude, and many scaly or laminated, with broad surface, raised on a sort of foot-stalk, and were thus button-shaped, or much resembling small fungi of the mushroom species. All those productions were white and solid, (not easily broken off,) and were apparently complete specimens of ossification. The possibility of the formation by gradual interstitial waste of bony substance was taken into consideration, but there were no evidences of such interstitial waste having occurred, there were no marks of softening or caries upon or around the surface affected, and the circumference of the bone, taken between the eminences of the affected surface, was equal to the shaft of the bone above or below the limits of disease.

modern pathology has taken a ground so well sustained by observation and facts, as to be perhaps impregnable. That on the sudden suspension of morbid actions in one seat, irritation and its consequences may be simultaneously developed in some other part; the latter holding a relation of dependance or substitution to the former, seems entitled to rank as an axiom of medicine.

ART. V. *Clinical Reports of Cases treated in the Infirmary of the Alms-house of the City and County of Philadelphia.* By SAMUEL JACKSON, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.

THE following cases are a portion of those that entered the clinical and medical wards of the Alms-house Infirmary during the last fall and this winter, and were most of them the subjects of the clinical lectures and remarks delivered to the medical students who attend on the practice of that establishment, by PROFESSOR CHAPMAN and myself. The reports of the cases were kept by the young gentlemen attached to the service of the institution, as resident physicians or resident students. It is to be remarked, that on the days intermediate to the visiting days of the attending physicians, the practice is directed by the resident physicians.

CASE I.—*Fever, with death from Mercurial Irritation.* T. Kelly, aged twenty-two years, entered the clinical ward, Sept. 26th, 1828; his habits of life regular; a weaver by trade. He had been ill seven weeks with fever, which, in the commencement, had been pronounced by his attending physician, bilious fever.

The symptoms on admission were, emaciation; cough troublesome at night; sense of stricture in chest; soreness of epigastrium, with tenderness and pain on slight pressure; hiccup; skin warm, dry and sallow; pulse frequent, some fulness; sordes on teeth; tongue clean, dry and polished; eyes sallow, carotids pulsate with force; perfectly sensible; great soreness of his flesh; no appetite and not troubled with thirst; diarrhœa, bowels moved six times before admission to day, and almost constantly since; discharge watery and offensive. He appeared much prostrated and exhausted by his removal to the Infirmary.

He stated that during his illness he had been vomited several times, had been very frequently purged, and had been taking powders of calomel.

Directions were given to sponge his body with tepid whiskey, to have cold applications maintained to his head, with small quantities of weak wine whey until he should recover from the effects of his fatigue, and chicken water for diet. Sulph. quinæ, gr. i. in mucilage gum Arab. was directed every three hours, and injections of laudanum, gtt. xx. with flaxseed mucilage, to check the diarrhœa. In the

evening improved; skin moist and of natural heat; pulse 76; tongue moistened; omitted sponging and cold to head; chest relieved.

27th.—Skin of natural warmth and moisture; tongue slightly furred, tumid, not florid, but disposed to become dry; pulse 96, soft; abdomen tumid; right hypochondrium soft, but painful when pressed; left is occupied by a large hard tumour extending to the umbilicus, but does not possess much sensibility; epistaxis; sordes on teeth; vomited in afternoon. Lime water, with arrow root and gum water for diet. Bowels too open.

28th.—Skin warm; tongue dry, nearly clean; pulse 100 and irritated; nausea. Omit sulph. quinæ; pediluvium, and sponge the body as before. Evening, febrile irritation declined; disorder of bowels checked.

29th.—Slept well; skin moist, cool, and comfortable; no fever; pulse 72, soft; tongue with adhesive mucus on it; slight hiccup and occasional retching; eyes jaundiced; abdomen covered with numerous purple spots. Beef tea for diet, alternated with oyster liquor.

30th.—No pain; tongue same; skin warmer; pulse more irritated; bowels disposed to be too loose. Tepid sponging, and injection of flaxseed mucilage and laudanum.

October 1st.—No fever, appears to be much improved.

2d.—Pulse more irritated; tongue become drier and florid; sordes collecting on teeth; diarrhœa; abdomen tympanitic or meteorized. Stimulant frictions to the skin, and lower extremities to be enveloped in blankets wrung out of warm water; injections of flaxseed and laudanum; fomentations to abdomen.

3d.—Pulse excited; skin warm; tongue florid; parotid glands swelled and painful. Poultice moistened with lead water to parotids.

4th.—Swelling extends over the whole jaws and face; skin stretched and shining; mouth cannot be opened to admit of an examination; skin hot; feet cold. Milk and oyster soup for diet.

5th.—Swelling increasing; directed leeches to parotids; breath offensive, mercurialized. The mercurial action has developed violent inflammation of all the salivary glands and mucous membrane of mouth, and which has extended to the adjacent tissues. No secretion of saliva from excess of irritative action.

6th.—Swelling extends down the neck on each side to near the clavicle; skin very tense but not discoloured, and the swelling is very tense, as if the fascia was put on the stretch; pressure is exceedingly painful; no fever.

7th.—Nearly in same state; cooling lotions applied to swelling; sleeps well; soft egg added to diet.

8th.—Suppuration of tumour in the parotids advancing; poultice.

9th.—Tumour opened, discharged large quantity of healthy pus; relieved of pain.

10th and 11th.—Discharge of pus very copious.

12th.—Had chill; diarrhoea came on; pulse very feeble. Carb. ammon.; julep, $\frac{z}{ss}$. every hour; oyster soup; beef tea.

13th.—Slept well; discharge from abscess very profuse; pulse extremely feeble; strength failing; diffusible stimulants exhibited ineffectually, and he died in the evening.—Case reported by Dr. ASHMEAD.

The body was removed by the friends of the deceased, who would not permit an autopsy to be performed.

Remarks.—This case, when first admitted, presented the characters attending on the inflammations of the mucous tissue of the digestive canal, assuming a chronic state, and which so frequently are the concluding act of bilious and remitting, and sometimes of intermittent fevers, treated improperly by emetics, active cathartics, and other irritating remedies, addressed to a tissue already morbidly irritated.

When fevers have passed to this state they generally are christened typhus; and when the meningeal membranes or the brain partake of the same condition, this designation is pronounced without hesitation; and if violent stimulation be the treatment adopted, typhus gravior, in its most characteristic shape, soon grows up under the hand of the practitioner.

On admission into the ward, the case seemed too desperate to permit an expectation of recovery to be entertained. An improvement did take place, and a fair prospect of restoration appeared to be opening, when an increase of irritation ensued, for which no cause could be at first assigned; swelling of the parotids and jaws soon followed, the origin of which, although not at first suspected, evidently arose from the action of the mercury, which had been administered previous to his entrance into the house, and had been taken during his protracted illness. No circumstance could have been more untoward than this accident. The recuperative powers of the economy were exhausted by the severe disease that had preceded, and were at best merely capable of rescuing him from the chronic inflammations that had been permitted to become established in the digestive mucous tissue; and which event was even a problematical occurrence. The development of the mercurial irritation in this state, and to the extent it assumed, was a reinforcement in favour of the disease, and to the detriment of the patient, that gave a decided turn to the contest against him.

This result of the attempt to cure fevers by the establishment of a salivation, or to place the economy under the comprehensive domination of the mercurial irritation, is, I have strong grounds to believe, a circumstance far more common than is suspected, or than many will be disposed to acknowledge.

This fashionable practice I have abandoned since the epidemic of 1822, the commencement of the series of epidemic intermittent, remittent and bilious fevers, that continue still to prevail over so large a portion of the country. I was compelled to renounce it from witnessing, in so many instances, the injurious results of the treatment to the patient. The mercurial action in violent cases, I found, could very rarely be brought on before the intensity of the local inflammations and the sympathetic fever were on the decline; and, then, the inflammations awakened by the mercurial irritation were not to be desired; they were nearly as much to be dreaded, as those which constituted the disease. In many cases after convalescence had commenced, the mercurial action came on, and I had the mortification to be perfectly convinced, though no suspicion crossed the mind of the patient, that a rapid recovery had been prevented, and protracted suffering been endured, in consequence of the employment of the remedy, though done under the sanction of high authority at home, and "great names abroad."

The mercurial irritation, it is to be kept in mind, when it is developed as febrile disturbances in the system are subsiding, does not, in numerous instances, induce a salivation; or is this effect a necessary consequence of the administration of the mercurial preparations. On the contrary they often excite, at that time, from the numerous irritations still existing, an extent of action in the mucous tissue of the digestive canal and the mouth, and which is thence extended into the glands connected with them, transcending the degree in the range of which secretion is possible. The consequence is inflammation, ulceration, hæmorrhages, together with re-excitement of febrile commotion. The new train of symptoms are then frequently set down for a relapse; and, if the mercurial treatment be instituted, the patient almost assuredly perishes.

Another effect of the mercurial irritation suddenly displayed in a system exhausted by an attack of fever, is prostration of the powers of the nervous system, and of the heart, with a rapid collapse terminating speedily in death. The patient, in these instances, appears to be entering into convalescence; the fever has ceased from two days to six or seven; the appetite is improving; the skin is moist, but has a flabby feeling; head unembarrassed; bowels regular. In the

midst of these favourable appearances, while all apprehensions are allayed, and a restoration is regarded as beyond a doubt, the patient, in all the cases that have come to my knowledge, is seized in the night with nervous tremors, cold sweats, great anxiety, rapid sinking of the forces, and after a short agony, often before the physician, who has been summoned on the invasion of the danger, can reach his patient, the mortal scene has closed. The cases in which the circumstances I have mentioned occurred, were those in which the system had been freely charged with mercury during the febrile period, but no affection of the gums had taken place.

The following case, in which death resulted from a salivation, occurred in the Alms-house Infirmary the fall before last.

CASE II.—*Bilious Fever, with death from Mercurial Irritation.*

David Anderson, aged twenty-six years, admitted into black men's medical ward, October 10th, 1827, with bilious fever. Habits intemperate; by trade a tanner; taken about a week previous to admission with head-ache and pain in back, whilst engaged at his trade. The symptoms on admission were high fever; pulse excited and frequent; skin hot, dry, and parched; tongue furred and brown; adnata of eyes of a golden colour; head-ache, and pain in lumbar region; bowels rather costive; great tenderness on pressing epigastrium. Twenty-five leeches to epigastrium. Calomel, p. vj.; oil, \mathfrak{z} i. to be given three hours afterwards. Blue mass, gr. iv. q. q. h.; ungt. hydrarg. fort. to be rubbed inside the thighs ter die; cold flaxseed enema, and fomentations to abdomen; barley water acidulated as drink.

11th.—Much better to day; skin less hot and dry; pulse diminished in frequency and force. Treatment continued; cold drinks allowed.

12th.—Doing well; eyes not as yellow; skin more moist; tongue large, swollen, and brownish-red at tip.

13th.—Tongue indented on each side, from pressing against the teeth; improving. Treatment continued.

14th.—Gums sore; breath mercurialized; pulse fuller and softer; skin soft; eyes losing their jaundiced character; tongue much swelled and sore; bowels regular; countenance more sprightly; no pain in head or in any part. Discontinue treatment. R. Gargle of borax and honey.

16th.—Salivary glands discharging freely; slight hæmorrhage from gums. R. Acet. plumb. gr. ij.; pulv. opii, gr. ss. q. q. h. Gargle continued. Diet, soup and chicken water; gum water lemonade as drink.

17th.—Free discharge from the mouth of saliva, mixed with blood;

lips and face much swollen; tongue filling up the cavity of the mouth, cannot speak distinctly in consequence; pulse full and tense; skin rather dry and harsh; mind clear. R. Venesection $\frac{3}{4}$ xij. Treatment continued. Pil. opii, p. j. at night. Spts. camp. applied on cloths to face constantly.

18th.—Swelling much reduced; discharge less; not so much blood; speaks more distinctly; the salivation and hæmorrhage continued; the strength rapidly failed, and death ensued on the 25th. Case reported by Dr. FREDERICK HORNER, resident physician.

Remarks.—When this patient was admitted, a number of similar cases of high grade of bilious remittent fever were in the same ward, and the medical wards of the whites. I remarked to the students who followed the clinical practice, that I would place this patient under the mercurial treatment, as a contrast to the cases of fever that had been treated on the principles of the physiologico-pathological doctrines. The afternoon of the same day, I was attacked myself, with an irregular malignant intermittent, in consequence of incessant fatigue, frequent prolonged exposure to the impure air of the wards, which were then crowded with fever patients, and almost daily dissections in a close, unventilated place, which the managers compel us to use for that purpose. I was not enabled to resume my professional duties until the middle of December, and consequently did not again see this patient. The mercurial treatment, though with great moderation, was continued.

From the report of the case it appears that an immediate improvement was manifested, which is mainly to be ascribed to the local depletion, strict antiphlogistic regimen, and the local treatment adapted to reduce the existing irritations. This improvement was too early for the mercurial treatment to have had any chance in its production. The amendment continued to progress until the 14th, when the mercurial action became unfolded. From that time, the case assumed a new aspect; inflammation of the gums, and parietes of the mouth, and of the salivary glands, came on; hæmorrhage from the mucous membrane of the mouth, fever, incapacity of swallowing, and death, which cannot be attributed to any other cause than the mercurial inflammation and fever that had been established.

CASE III.—*Chronic Entero-colitis and Ascites*. Francis Wolf, a Bohemian, aged fifty years, entered the men's clinical ward, November 1st, with ascites and œdema of his lower extremities. He has suffered with dysentery fourteen months, and has at present a dozen sanguineous discharges daily. His abdomen, which has been swelled five months,

is now remarkably distended, and emits on percussion a slight fluctuation, with considerable tympanitic resonance. Urine high-coloured and scanty; does not coagulate by heat.

2d.—Six stools since last evening; pulse full and strong; barley-water for diet; fomentations to abdomen.

3d.—Feels much better; had but one stool; pulse weak; pain in epigastrium. Ordered ten cups to the same. R. Blue pill, grs. iij. pulv. scillæ, gr. $\frac{1}{2}$. h. s. R. Infus. digitalis, \mathfrak{z} iss.—carb. sodæ, \mathfrak{z} i.—aq. font. \mathfrak{z} ij.—suc. limon. q. s.

4th.—Much better; no tenderness in epigastrium; complains of being griped by the medicine; omit the mixture, and directed the simple infusion of digitalis; urine very copious; abdomen much reduced in size and tension.

5th.—Better; made a gallon of water within the twenty-four hours; no stool; pulse becoming active.

6th.—Made little water this morning; in the afternoon none; pulse rising; skin hot. Ordered twelve cups to abdomen.

7th.—Pulse too active; skin hot; bowels open twice; venesection to \mathfrak{z} xij. Evening. Found him with a high fever and dry tongue, supposed to have been excited by overheating the room.

8th.—Pulse reduced in frequency and force; bowels open; tongue nearly natural; skin cool; urinates very little. Re-commenced with infusion of digitalis. Coch. mag. q. t. h.

9th.—Pulse soft; bowels open; made a gallon and a half of water last night and to-day.

10th.—Tongue becoming red and dry; made a good deal of water last night; omit digitalis and his pill at night.

11th.—Tongue cleaning; pulse soft; makes very little water.

12th.—Bowels troublesome; makes very little water. Ordered the following: R. Pil. hydrarg. grs. ij.—ipecac. and opium, \mathfrak{aa} . gr. $\frac{1}{4}$. made into pill; take one every four hours; venesection to \mathfrak{z} xij. in evening. Allowed barley-water for drink.

13th.—No material change; took his pills yesterday evening; complains of an unusual, uncomfortable feeling in his bowels, which he attributes to his medicine; discontinued pills, and takes fifty drops of laudanum.

14th.—Slept well last night; pulse better; discharged about a gallon of water this morning.

15th.—Discharged half a gallon of water last night; diarrhœa.

16th.—Feels better; bowels still open; discharged half a gallon of urine; very little changed in other symptoms. Ordered pills of two

grains sacc. sat. and half a grain of opii every two hours to check diarrhœa.

17th.—Pulse excited; skin cool; made a gallon of water; abdomen very much relaxed.

18th.—Bowels better; swelling decreasing; tongue red and disposed to dry.

19th.—Bowels open; skin warm; pupils very much contracted; has appeared rather flighty for the last two days.

20th.—Found him this morning speechless, cold, and almost without pulse. About 11 o'clock he died.

Wolf was examined in presence of most of the gentlemen of the Alms-house on the morning of the 21st. The body was not much emaciated. On opening the abdomen a considerable quantity of water escaped. The peritoneum was opaque, and presented an appearance of being thickened; it was in many places adherent to the opposing surface. The mucous coat of the stomach was thickened, and in many places red. Viewed externally, the small and large intestines were of a deep mahogany colour throughout their course. The muscular coat of all the intestines was in a state of hypertrophia, at least seven times thicker than it is usually. Internally the mucous membrane was thickened, rough, from turgid and reddish follicles, and was covered with an adhesive mucus. The liver was greatly enlarged, its specific gravity very much increased, and the structure rendered very hard and tough. When cut into it exhibited a light yellow appearance, and was studded through the texture with numerous small bodies of the same colour, presenting what is usually called the granulated liver. Case recorded by Dr. JONES, who had charge of the ward.

Remarks.—In Wolf, we are presented with a case of ascites, which evidently was induced by long-protracted irritation of the mucous tissue of the alimentary canal, and which supervened notwithstanding the frequent copious discharges from the bowels. According to the statement he made, his bowels had been in a disordered state, having frequent discharges daily during nine months, when the effusion into the abdomen commenced, and had continued until his admission. He had been under treatment, but without the slightest check having been put to the intestinal discharges, which were, however, controlled immediately by an appropriate regimen.

Of the numerous cases of dropsy that enter this infirmary, the largest proportion of them are consequences of chronic irritation and inflammation of the mucous tissue of the intestines, which, after a

certain period appears to be assumed by the peritoneal covering, and dropsical effusion ensues. In these cases, much of the swelling and of the inconvenience experienced by the patient, proceeds from the tympanitic condition, resulting from the development of flatus in great quantities in the alimentary canal. This secretion of flatus from the mucous tissues is one of the effects of its irritation.

The generally received treatment of dropsy is purging with hydragogue cathartics. In this case a diarrhoea existed throughout the disease, yet neither prevented its formation, or diminished the effusion after it had occurred. This practice has been followed with every variety of the hydragogues in this infirmary, but its ill success has very much discouraged me in its employment. It is a rare circumstance for a case of ascites to recover. It is true, in some instances, the effused fluid is evacuated, but the patient approaches no nearer to a recovery, and the effusion again very speedily returns. The purging very often affords relief for a few hours by expelling the flatus, and the extreme distention is thus diminished, but is soon replaced. The temporary relief to the feelings of the patient from purging, is generally produced in this way: the pressure resisting the descent of the diaphragm is removed by the expulsion of the flatus of the colon, and the sense of suffocation is removed for a time. Finding in nearly all our cases of ascites, chronic inflammation and more or less of structural derangement of the alimentary mucous membrane, I have been led to doubt the propriety of adopting this practice so generally followed and recommended. Certain it is, that of the numerous cases of ascites that have been annually treated in our infirmary on that plan, not a single permanent cure can be adduced in its justification.

CASE IV.—Chronic Gastro-entero Colitis; Peritoneal Inflammation and Dropsy. William Mackin, aged forty, was admitted, October 22d, with intermittent fever. His abdomen was tender and swelled, and his extremities quite œdematous; tongue florid, moist, and slightly furred; pulse full, frequent, and tense. Ordered flaxseed mucilage and thin sago, exclusively for diet.

23d.—He has decided ascites; some flatulence and tenderness at the epigastrium; tongue dry and red; had a chill at nine o'clock yesterday, and remains feverish. Diet, gum-water. Tinct. opii and hot bricks to anticipate the chill.

24th, 25th, 26th.—Tongue remains dry and furred; pulse becoming softer; abdomen swelled; fluctuation discernible.

27th.—Abdomen more tumid. Ordered the following injection

three times a day: R. Tinct. scillæ, ℥ss. mucilage acac. ℥ij. The irritated state of his stomach rendered it improper to prescribe active diuretics.

28th.—Urine increased in quantity.

29th.—Urine not as copious; tongue more parched and furred.

31st.—Had a complete paroxysm of intermittent.

November 1st.—Skin hot and dry; pulse irritated; tongue dry and florid; tenderness at the epigastrium. Ordered fifty leeches to epigastrium; discontinued the injection of tinct. of squill.

2d.—Appearance completely changed; no fever; pulse natural; tenderness of epigastrium removed; tongue clean and moist; skin cool; made a considerable quantity of water; swelling diminished.

3d.—Continues to improve; abdomen very much distended on the 1st inst. has fallen to nearly the natural size; had a good many watery stools. Evening, a slight chill with some pain in the abdomen. Ordered cups to the same.

4th.—No swelling but in his legs; tongue clean and moist; skin cool; pulse soft and weak. Ordered a table-spoonful of infusion of digitalis.

5th.—Much the same; a considerable quantity of water passed from his bowels.

6th.—Little change; made water more than a dozen times.

7th.—Œdema of legs and feet diminishing; makes a great deal of urine; had a slight chill in the afternoon.

8th.—Apparently much improved; was removed to the clinical ward, which the nurse overheated. At night had considerable fever; pulse excited; skin hot and dry; pain in abdomen; tongue red and furred. Cups to abdomen; injection to open his bowels.

9th.—Bowels open; skin hot; tongue red and furred; pulse irritated and frequent. Ordered forty leeches to epigastrium; barley water for diet. Omit infusion of digitalis.

10th.—Tongue dry and furred; pulse frequent; skin cool.

11th.—Skin cool; tongue cleaner; makes a considerable quantity of water. Evening. Had a slight chill this morning, and is quite feverish to night.

12th.—Better; tongue cleaning; skin cool; pulse reduced. Soda powders.

13th.—No excitement; complains of uneasiness at night. Ordered fifty drops of laudanum.

14th.—Tongue clean; pulse soft; slept very well; makes water moderately.

16th.—Better this morning; tongue nearly clean; skin warm; pulse soft and weak; bowels open.

17th, 18th.—Tongue dry; pulse weak; skin natural; makes a considerable quantity of water.

19th.—Pulse more regular and stronger; tongue less dry; complains constantly of the increasing tension of his abdomen, which is chiefly caused by flatus.

21st, 22d.—Appears to improve; passed a good deal of urine.

25th.—Continues daily now to grow worse; has troublesome diarrhoea; tongue always florid, and frequently dry; begins also to vomit sometimes; pulse sometimes soft and weak, and at others very frequent and quick.

28th.—Worse; has been vomiting; tongue red and dry. Ordered cups to the epigastrium.

30th.—Mackin became so cold and weak this evening that it was necessary to give him some weak brandy and water.

December 1st.—Sinking. Ordered wine whey, and a blister to his chest. During the day he became speechless, and died about two o'clock in the morning.—Case reported by Dr. JONES attached to the medical wards.

Mackin was examined on the 1st of December. Body emaciated; on opening the abdomen several gallons of water escaped, and the peritoneum exhibited an opaque colour. In the hypogastric region, the extremity of the omentum was attached to the peritoneum by an adventitious cellular membrane. This, with a considerable portion of the peritoneum and omentum, was very vascular, and beautifully injected with red blood. On opening the stomach, the mucous membrane of the cardiac extremity was vascular, and exhibited red injection in several places; that of the pylorus and duodenum was thickened, and changed to a dark lead colour. The mucous membrane of the jejunum was thickened, that of the lower end of the ilium, and the whole tract of the colon was thickened, and when first opened black, having an appearance such as might be occasioned by charcoal worked up into the tissue; it faded by maceration to a slate colour. The liver was reduced to one-half the natural size, and very heavy. In its structure it was hard and granulated. The gall-bladder on being opened exhibited the mucous lining of a marbled appearance, spotted, with a greenish-black hue interspersed with small reddened tumours, which were inflamed follicles. The green colour penetrated the thickness of the membrane, and the surface beneath it.

Remarks.—The early history of this case is defective, and leaves

in doubt whether the irregular intermittent that occasionally was manifested after his admission, depended, as it so often does, on the chronic gastro-enteritic irritations under which Mackin unquestionably laboured, and of which it was an effect; or whether it had commenced as intermittents commonly do, and to which the chronic irritations had supervened.

This case affords another evidence to the fact of peritoneal effusion accompanying chronic inflammation of the *alimentary mucous tissue*. In this instance, peritoneal inflammation was designated in the adhesions and highly vascular state of the new-formed membranes, as well as of the peritoneum in the hypogastric region.

At no time was the accumulation of fluid in the abdomen so great as to occasion inconvenience, or to interfere with the healthy functions. The distress suffered, and derangement of function experienced, emanated from the inflammation of the digestive and intestinal mucous membrane. When it existed in a certain intensity, paroxysmal fever was present; as soon as local depletion and regimen had reduced its intensity, an improvement was manifested. Even the dropsical effusion had disappeared. The expression of the face, which was haggard, the constantly arid tongue, with the vivid circulation of the capillaries of its mucous covering, and the defect of nutrition, spoke too plain a language to permit the apparent amendment to impose on us a belief of a recovery. They too clearly indicated a change in the structure of the alimentary mucous tissue deranging its important functions, and under which the whole fabric gradually deteriorates and decays. It is not the effusion of the serous fluid into the cavities that constitutes the essential feature of the disease in dropsy, or that threatens in most instances the life of the patient; it is the inflammations of which the effusion is the effect or consequence; and the alteration of structure induced by them that forms the real difficulty for the treatment of the disease, and the preservation of existence.

CASE V.—*Ascites and Anasarca*. Mary Kremer, aged thirty-four years, a married woman of temperate habits, admitted into the house 25th August, 1828. Has been unwell two weeks. She was attacked with intermittent fever of the tertian type; on three successive days she took large doses of salts and about a week afterwards became affected with uterine hæmorrhage, accompanied with fever, which continued for three weeks after her admission into the house. The catamenia had been suppressed by exposure to cold about two months anterior to the appearance of the flooding. A previous attack of

chills and fevers had caused an enlargement of her spleen which had existed about two years.

On her admission she was feverish, complained of pain in the hypogastric region, with constant hæmorrhage from the uterus; she was bled several times, and cupped frequently on the hypogastric region. After these expedients the hæmorrhage ceased, but anasarca and ascites ensued, and increased to so great a degree as to occasion difficulty of breathing, inability to lie down, and every appearance of a speedy dissolution. Punctures of the legs and thighs were resorted to, and a large quantity of water was thus evacuated, from which the patient experienced much relief. The cupping was continued, and when the pulse was properly reduced, no symptoms manifesting irritation of the mucous membrane of the alimentary canal, the administration of the following pills was commenced: R. Pulv. scill. grs. v. fol. dig. grs. viii. divided into pills of two grains each; a pill three times a day.

The secretion of urine became in a short time more copious, and the swelling sensibly diminished. Her diet was restricted; and her ordinary drink was the infusion of juniper berries and cremor tartar, which proved sufficient to retain her bowels gently open. The inflammation of the spleen was treated by frequent topical depletion when the pulse appeared to demand it.

November 16th.—At night, owing to indulgence in improper diet, her pulse became greatly excited; she had head-ache and a high fever. She was bled to $\frac{3}{4}$ xxx. and her diet reduced to barley and gum-water.

18th.—Diet increased to mush and milk, with a small portion of chicken soup. The patient rapidly improved; her appetite became good; she urinated freely; the anasarca gradually declined, and the effusion into the abdomen in a great measure disappeared.

December 17th.—Kremer remains in the ward without a single dropsical symptom since last report. Her health is as good as it has been for some years, and she is employed in sewing, and other light work. Case recorded by Dr. HUNT, resident physician.

Remarks.—The report of this case is not as full as could be desired, but it is sufficient to prove that Kremer was the subject of extensive local inflammations, which preceded the dropsical effusion. When this state existed in its fullest extent, from the disheartening results of the former practice by hydragogue cathartics, they were not resorted to; and general and local depletions with restricted diet were principally relied on.

The condition of this woman appeared utterly hopeless, and no ex-

pectation of a recovery was entertained. The abdomen was very much distended, anasarca prevailed to an extreme degree, and for more than two weeks she was propped up in bed, unable to assume the recumbent posture.

The distention of the lower extremities was so great, numerous punctures were made into the skin, from which the effused fluid continued to discharge for ten days or more; the extremities were reduced to their natural size, and at the same time the swelling of the abdomen diminished.

From the history of this case, depletion with regimen appears to have subdued the inflammations of the digestive organs, of the spleen and uterus, which had given rise to the dropsical effusion, and which have not again recurred.

CASE VI.--Malignant Intermittent. Nov. 4th.--Charles Cavanaugh, ætat twenty-two, was admitted about twelve o'clock, reporting that he had intermittent fever. He had been engaged during the summer at work on the canal at the Juniata, where he had contracted the disease; and of a gang of three hundred who left the city, he stated more than half were dead. It was originally tertian: for the last week it had assumed the quotidian type, coming on at two o'clock. This change has been effected by fatigue in travelling from the Juniata. Habits intemperate.

When the chill was subsiding about two o'clock to-day, the fever commenced with the sensation of a violent blow upon the forehead, and immediately he jumped from his bed, and ran about the ward with the wildness of maniacal delirium. Being overtaken and replaced, he appeared ignorant, on becoming better, that he had left his bed. At this period he was found labouring under a most violent excitement; he appeared almost distracted with the pain in his head; his respiration was exceedingly laborious; the skin very hot; and the pulse full, strong, and frequent; $\frac{3}{4}$ xij. of blood were immediately taken from his arm, and in a few minutes after he was completely relieved. 7 P. M. asleep, with his head covered; woke up alarmed; skin very hot; pulse full and frequent.

5th.—Better this morning; the intermission is not complete; skin hot; pulse frequent; tongue moist and furred; eyes injected and jaundiced; absolute diet; hot revulsives to anticipate chill; the paroxysm in the afternoon was nearly as violent as that of yesterday; required two men to hold him in bed; his spleen was so engorged that it rose in a large ball under the hand; having some tenderness at the epigastrium, and a dry, furred tongue, he was ordered to be cupped freely.

6th.—A tolerable intermission early this morning; tongue nearly clean. Ordered to take in solution a grain of sulphate of quinine every hour. Paroxysm came on an hour and a half earlier to-day; not so violent; mustard plasters were applied to his extremities when the chill threatened; tongue very much furred in the evening. Ordered cups again to epigastrium.

7th.—His stomach still irritable; tongue foul; omit quinine; sinapisms when chill threatens. 9 P. M. Had no paroxysm this day.

Discharged well, having had no return.—Case reported by Dr. JONES.

Remarks.—This case was an intermittent of malignant character, threatening apoplexy in the paroxysm. The intemperate habits of this man, it is most probable, gave to his brain the predisposition which invested its sympathetic irritation when, in the febrile stage, it began to be irradiated from the stomach, with its extreme intensity.

A full bleeding immediately arrested the violence of the cerebral irritation, and diminished the congestion of the brain. The same remedy would have been more freely urged, but for the habits of the patient, which always counter-indicate the very liberal employment of the lancet. The intemperate are very soon prostrated by general bleeding, and when they once begin to sink, it is almost impossible to re-excite them. This is one of the causes that render inflammations, and diseases requiring free depletion in their treatment, so generally fatal in those who abuse the employment of ardent spirits. They will not bear the treatment which can alone cure them.

A circumstance in this case to be remarked, is the extraordinary suddenness with which the cerebral irritation commenced, and consequent raptus of blood to the brain. Cavanaugh insisted on it, he had received a blow, and for a time was unconscious of his situation. We have here presented the mode in which apoplexies are induced, and which so commonly draw the cerebral irritation on which they depend, from gastric irritation.

It is also to be observed that the sulphate of quinine was not tolerated by the stomach, the irritation of which it augmented, and that the cure was effected chiefly by attacking the gastric irritation, by low diet, cooling demulcent drinks, and local depletion.

CASE VII.—*Malignant Intermittent, with Gangrene of Right Lung.* — Fin, an Irishman, aged twenty-three years, admitted into men's clinical ward, September 22d, 1828. Habits of excessive intemperance, was reported to have had intermittent of tertian type,

for several days previous to his entrance into the ward, but no account of the treatment.

On admission, at six in the evening, he was in a paroxysm; the force of which was sustained by the brain. The symptoms were hot skin; pulse full, frequent, and soft; head hotter than the body; face turgid and flushed; eyes rolled up in their sockets, watery; gnashes his teeth; speechless; insensible to surrounding objects; cannot be roused; appears to have but little sensation when pinched on the extremities; pressure on epigastrium produced contortions of the face, and marks of pain.

The head was enveloped in cloths dipped in cold water; the arms were sponged with cold water; hot applications to legs; cups to the epigastrium; and fomentations of tepid flaxseed mucilage to the abdomen; when the heat of the surface was somewhat reduced: at 9 P. M. movable sinapisms were applied to the extremities, and cups to the back of the neck; bowels opened by irritating injection; cold barley-water for drink.

23d.—Condition entirely changed; countenance composed; eyes natural, perfectly sensible; skin moist, and of natural temperature; tongue tremulous, covered with yellowish fur; pulse soft and regular; no pain of head. Treatment continued, with exception of sponging. Paroxysm commenced at noon with chill and vomiting; became insensible; eyes wild in expression, and rolling in their sockets; carotids pulsated with force; face did not flush, or skin become as hot as yesterday. Same treatment continued, with calomel gr. xx. succeeded by soda powders; pulse 90 and full, but without force; cups applied to epigastrium; bowels were freely opened.

24th.—Apyrexia in morning; quite sensible; skin moist and natural; tongue moist and furred, but disposed to clean off; pulse 80, full; complains of pain in abdomen, and lies with legs drawn up to relieve pressure, by relaxing the abdominal muscles; 80 leeches were applied to abdomen; gum-water for sole nutriment. At noon no paroxysm; pulse reduced by leeching; skin cool; sinapisms to extremities with a view to prevent the cold stage. Paroxysm attacked in the evening with usual cerebral disorder, but less intense. Same treatment.

25th.—Apyrexia again complete; sulph. quinine gr. ii. every hour, to be omitted should paroxysm return; blisters to legs in order to excite a more durable impression; the lower extremities to be wrapped in blankets, wrung out of hot water, to be renewed as they lose their temperature; hot bricks to feet, and cold applications to the head. Perspirations was excited by the remedies, and the pa-

roxysm in the evening consisted merely in slight delirium, with a wild expression of the eye.

26th.—Much improved; tongue cleaning; skin moist and natural; chicken soup, with milk and water for drink; at twelve o'clock injection of laudanum to prevent formation of chill. Evening. Paroxysm lighter than that of yesterday; bowels opened by an injection.

27th.—Slept well; diet the same; no paroxysm to-day.

28th.—Rested well; apyrexia; stomach sick towards evening; suspend sulph. quinine.

29th.—Had a good night; tongue cleaning; pulse good; renew sulph. quinine; diet, beef tea and gruel; bowels regular.

30th.—Convalescent; breast of chicken; sulph. quinine omitted.

October 1st.—Improving.

2d and 3d.—Appeared to be convalescent.

4th.—Feverish, but had no chill; discovered a large sloughing ulcer on the sacrum; poultice applied, and relieved the pressure; fever declined towards evening.

5th.—Slight fever in morning; spts. mindereri \mathfrak{J} ii. every hour in mucilage; fever increased towards noon.

6th.—Has cough and soreness of chest; pulse 115; skin hot; bowels open; tongue furred and tumid, but not red; cough increased, with increased force of pulse at night; venesection \mathfrak{Z} viii. and cups over epigastrium; diet, barley-water.

7th.—Blood drawn was buffed; cough lessened; pulse reduced, soft; bowels moved three times; spts. mindereri continued, and brown mixture.

8th.—Cough more severe; expectorates puruloid mucus. Examined with the stethoscope; respiration was natural in left lung; no vesicular respiration in right, but sound of tracheal respiration was distinguished; cannot make a full inhalation, as it excites pain which is referred to epigastrium; pulse soft; breath excessively fetid; bowels regular.

Though he has been much exposed to the weather, he has not had previously any cough; cups freely applied over the right side of the thorax. Evening. Very slight fever; hoarseness; cough troublesome; sputa exceedingly offensive, and have suddenly become of dark brown; at first the colour was supposed to be caused by the expectorant he was using. The chest again examined, gave indication of natural respiration in left lung, with absence of respiration in the right, and some mucous rattle.

9th.—Same state; treatment continued.

10th.—Cough violent; respiration hurried; breath has gangrenous

odour; bowels open; cups to chest; anodyne and spts. mindereri; cough abated after cupping; venesection $\frac{3}{4}$ vi. and omit spts. mindereri.

11th.—Cough diminished; respiration more natural; no fever; tongue clean; pulse soft, frequent; blister over right side of chest.

12th.—No change.

13th.—Same state; no fever; expectoration dark bloody appearance, and exceedingly offensive; blister drew well; bowels open.

15th.—No change until to-day, when pulse became very feeble; mind wandering, and surface covered with sweat. Brandy toddy and volatile julep administered with generous diet; appetite good.

16th.—Has no pain; believes he would be well if it were not for the cough; it is very troublesome; face pallid, and covered with sweat. Treatment continued.

17th.—Grows worse; respiration short and hurried; pulse excited by stimulants, and skin becoming hot; desires cold drinks; face pallid; lips blue.

18th.—Expectoration became more bloody, and at noon hæmorrhage from the lungs ensued, which appeared to suffocate him, as he could not expectorate it with sufficient rapidity.—Case reported by Dr. ASHMEAD, resident physician, who made the autopsy.

The left lung was natural; the right lung was solid; the vesicular structure destroyed from pneumonic inflammation, advanced to the second and third stages, with a large gangrenous excavation. The notes of the dissection were mislaid by Dr. A. before they were recorded, which renders it less minute and specific than it ought to be to prove perfectly satisfactory.

Remarks.—Fin's case offers another example of the malignant intermittent type, or what may probably be named an intermittent coma; each paroxysm producing the degree of cerebral irritation and congestion, on which that state depends. General depletion would have been adopted in the paroxysm, had not this individual been excessively addicted to the intemperate use of ardent spirits; we were compelled to rely on cold to the head, revulsives to attract the circulation from the brain, and local depletion. To prevent the formation of the paroxysm, and to give another direction to the capillary excitement than to the brain, irritations on the skin and extremities were made to precede the chill. When these means had accomplished the objects intended, and the local irritations that could be detected were removed, the sulph. quinine completed the task and confirmed the organs in their natural state.

The inquiry remains to be determined as to the period when the

pneumonic inflammation under which the patient succumbed, or rather its consequences, first commenced. Did it exist during the period of the intermittent, or was it contracted subsequently? The last supposition is not probable. He was in a comfortable ward, had not left his bed, and was not exposed to any of the common exciting causes of that disease; neither were any symptoms displayed, such as usually announce the invasion of pneumonia. Besides, when the cough attracted attention to the chest, the examination with the stethoscope made known the fact that the right lung had already passed the first stage, and had advanced into the second stage of the disease.

I am rather disposed to believe that the inflammation of the lung had either commenced with the invasion of the intermittent, or that the lung, from some previous attack, had become hepatized, and the intermittent, by exciting new irritation, had hurried on the termination in gangrene. On either of these suppositions, the pneumonic symptoms were suppressed for the time, by the more violent cerebral disturbance and gastric irritation, but became unmasked as those declined in intensity. When an organ or tissue has suffered in its structure from inflammation, has become hardened, indurated, or hepatized, new inflammation excited in it, most generally proceeds rapidly to the production of disorganization, and gangrene is a usual consequence under such circumstances.

CASE VIII.—*Chronic Intermittent.* Arthur Murphy, ætat 21, admitted November 21st, with an intermittent, under which he has suffered for more than a year. His last attack has been a violent quotidian every day this week. The paroxysm appears at 10, P. M. with a violent head-ache and delirium; tongue furred and disposed to dry; pulse full and frequent. Diet.

22d.—Escaped a paroxysm last night.

23d.—Had a chill at ten last night, succeeded by fever, which was attended with severe head-ache; tongue cleaning; pulse full and frequent.

24th.—Had an attack of the same kind last evening; tongue cleaned. Ordered, pill sulph. quin. gr. i. every hour.

25th.—A similar attack last evening; has some head-ache this morning, with a hot skin, and full, strong pulse. Ordered venesection $\frac{3}{4}$ xii.

26th.—No chill last night; much better this morning.

27th.—Better; no chill last night. Piperine, gr. i. added to the sulph. quinæ.

28th.—Continues to improve; no chill last evening.

29th.—Better; no chill or fever.

December 1st.—This man has had no chill since; improves every day in appearance; is now on full diet; and in a few days will be sent out of the house. Case reported by Dr. JONES, resident physician.

Remarks.—This was a case of chronic intermittent, unattended with inveterate local inflammations, as most of the intermittents of the winter season, that enter our infirmary, usually are, and which render their cure so very difficult to accomplish. It serves to illustrate the advantages of blood-letting and restricted regimen in these cases, in the immediate check put to it by the detraction of blood.

CASE IX.—*Intermittent, with Cardiac Irritation.* Edward Carberry, ætat 34, since August last has been ill most of the time with intermittent fever. This man has experienced it sometimes of the tertian, at others of the quotidian type, and latterly has a paroxysm about once a week. He entered the medical wards, November 25th, with pains in his head and breast, considerable heat of the surface, a flushed countenance, and a full, frequent, and strong pulse. Says that during the paroxysm of intermittent, he suffered a great deal in his head and chest. He has been purged a great many times with calomel and jalap, while treated out of the house. Considerable infiltration into the general cellular tissue is present, and the scrotum especially is very much enlarged. Ordered venesection and absolute diet.

26th.—Was bled yesterday to $\frac{3}{4}$ xij.; felt at that time relieved; last night he had a chill followed by fever; this morning tongue clean; complains of pain in his chest. Cups were directed to be applied.

27th.—On examining his chest with the stethoscope, the impulse and sound of the heart on the left of the sternum is greater and more extended than natural; under the sternum, and to the right, the impulse is considerable, and the sound can be heard all over the right side of the chest. He says now, that during the paroxysm of intermittent, he has always suffered with great oppression and palpitation about his heart, and an equal difficulty of breathing. He wakes often during the night, with a sense of suffocation, and has to sit up in his bed. He was ordered to be cupped immediately on the region of the heart.

28th.—The last cupping brought down his pulse completely; it is now full and soft; skin warm and moist; tongue clean. Sulph. quinine, gr. i. every hour.

29th.—The action of his heart has greatly diminished, so that the excess of sound or impulse is much less perceptible; his pulse is full

without force, and less frequent; he slept last night better than he has done for some time, and was not once disturbed with a sense of suffocation.

December 2d.—Carberry is now convalescent; the anasarca has deserted him, and the scrotum is almost reduced to the natural size; he has had no chill since the evening of the 25th ult.; the action of his heart is almost natural, and he sleeps undisturbed. Discharged well. Case reported by Dr. JONES.

Remarks.—In this case of intermittent, irritation, or what is probable, inflammation of the heart, a very common consequence of the intermittent paroxysms, had become developed. From the state of the pulse and the pains in the chest, Dr. Jones, who had charge of the ward, and is one of the few gentlemen who have availed themselves of the opportunity presented by the practice of this establishment to familiarize themselves with the use of the stethoscope, made an exploration of the thorax, and determined immediately the cause of the symptoms of which he complained. The cupping directed by Dr. J. to the cardiac region, had an immediate effect in abating the irritation of the heart, and convalescence was at once established. The quinine in this case was prescribed more with a view to guard against the consequences that might result from the habits of the patient, who was intemperate, than on account of the intermittent type of the disease; that would fall of itself, when the local irritations maintaining it were dissipated.

CASE X.—Intermittent Fever with Gastritis. Mary Ann Jacobs, aged thirty-five years, a married woman of good habits, has had for a year or two past pain in her chest with cough, and complicated for six months with intermittent fever. She was treated, previous to her admission into the house, for the intermittent fever for some time, with bark, wine, &c. without success. She states, that three months ago her husband, while in a state of drunkenness, threw her down, and stamped on her breast and abdomen, since which she has suffered under almost daily paroxysms of the most acute lancinating pain, which is aggravated during the chill. She has been cupped, and had blisters and fomentations applied without any other than slight temporary relief. Admitted into women's clinical ward, October 29th, 1828. No regular record of the symptoms was kept during the first four days. From that date to November 3d, she was several times bled and cupped. Had a paroxysm of intermittent fever on the third.

November 4th.—Passed a very restless night; sleep was altogether

precluded by severe pain in the stomach, accompanied with sickness. There is tenderness of the whole abdomen, with flaccidity of the abdominal muscles; bowels open once a day; very little pain in the head; skin warm and dry; tongue moist, covered with a light white fur, except at the point, which is clean, and somewhat red; pulse full, strong, and frequent. Ordered venesection $\tilde{3}$ xij.; barley water and lemonade for sole diet and drink. Afternoon, half past 3 o'clock. Had a chill about noon, and now suffers excruciating pain, which she refers to the scrobiculus cordis; has tenderness of the abdomen; skin cool, and rather pale; tongue dryish; pulse frequent, not very strong. Leeches ordered, but could not be procured, and cups were applied to the epigastrium, followed by fomentations.

5th.—Passed a good night; pain to-day not so great; tongue red, and covered with light fur, indented by the teeth; nausea; pulse frequent, (112,) tense and quick; blood drawn yesterday cupped and buffed. Ordered venesection; (the abstraction of $\tilde{3}$ xix. induced syncope;) eighty leeches were subsequently applied to abdomen; fomentations and hot foot-baths.

6th.—Much better; no pain, and less tenderness. She had no chill or fever yesterday; no nausea since the leeching; skin is in good condition; tongue much more natural; pulse frequent, of more volume, quick, and somewhat tense: blood taken yesterday coagulated with firmness. Ordered venesection $\tilde{3}$ xvi. and hot foot-bath: continue absolute diet. Afternoon. Pulse rising. Ordered eighty leeches to abdomen, to be followed by fomentations.

7th.—Still better; no chill yesterday; skin soft and pleasant; pulse frequent, of good volume, compressible, and slightly tense; bowels open daily: blood of yesterday inflammatory. Ordered fomentations to abdomen, and hot foot-bath.

8th.—Improved; the following liniment directed to be rubbed tepid on the abdomen four times a day:—℞. Spts. camph. $\tilde{3}$ iv.—spts. terebin. $\tilde{3}$ i.—aq. ammon., tr. theb. āā $\tilde{3}$ ss.—ol. oliv. $\tilde{3}$ ij.—M. ft. lin. Allow a few table-spoonsful of soup daily.

11th.—She has some pain in the head; slight tenderness of the abdomen; skin perspirable; tongue natural; bowels regular; pulse 112, somewhat tense, and of good volume. She was directed to take calomel, grs. ix.

12th.—Suffers under more pain than she has lately felt; skin preternaturally warm; tongue good; pulse 104, quick and tense; bowels opened once yesterday. Directions were given to restrict her diet to barley water. Evening. Still refers to the scrobiculus cordis as the

seat of pain, which is now sharp, lancinating, and increased in degree. Eight cups were applied to the epigastrium.

13th.—Suffers less, though she is incommoded by the eructation of an acid gas; bowels open seven or eight times in the course of the night; pulse less tense; skin and tongue natural. Fomentations and hot pediluvium.

14th.—Improving; bowels open three times yesterday, but not once during the night. Allow a small quantity of chocolate deprived of its oil.

20th.—She has been mending, and employed in nursing a child in the ward for two days past in the enjoyment of tolerable health. She has, as articles of diet, in addition to the chocolate, Indian gruel and milk and an egg. She still has a slight cough, but the stethoscope exhibits a perfectly healthy state of the lungs.

21st.—She is troubled with occasional returns of slight pain. Ordered to rub the tartar emetic ointment over her stomach twice a day.

23d.—The ointment has produced a copious crop of pustules. Although she was unwilling to submit to the remedy, she states, that it “scattered” the pain almost immediately.

December 18th.—Has been engaged as an assistant in the ward since last report, without a return of the intermittent, and makes but slight complaint of the pains she suffered in her stomach. Is allowed animal food: she has acquired flesh, and her complexion is greatly improved. Case reported by Dr. HUNT, who had charge of the ward.

Remarks.—In the treatment of intermittent fever, the type of the disease should not be attended to while the symptoms of local inflammations are strongly marked. They are of the most importance, and no permanent impression can be made on the disease until the local affections are subdued. This precept is universal, not only as it respects chronic, but also acute or recent intermittents. The febrile paroxysms, notwithstanding their periodical character, are as much sympathetic, and as clearly emanate from the local irritations as are continued and inflammatory fevers, that are unequivocally the product of topical inflammation. The simple removal of the local affection is, very frequently, all that is necessary to dissipate the periodical febrile disturbance; but when they are removed, the cinchona and its preparations, that were previously impotent, are now remedies of almost specific certainty in arresting and preventing the recurrence of the febrile paroxysms.

The case of Jacobs is a striking exemplification of the correctness

of the preceding observations. Before her admission she had been treated for the intermittent type by cinchona, wine, and other similar means usually resorted to for the cure of intermittent; and the local inflammation, (gastritis, and it is possible a limited peritonitis,) were disregarded. Failure and defeat were the consequence. The intermittent proved intractable; the woman's sufferings increased, her general health was rapidly deteriorating, and she was compelled to seek refuge in our wards.

As soon as she came under the treatment of this establishment, a reverse system to that which had proved, not merely inefficient but mischievous, was instituted. It was the intermittent that was disregarded; while the local inflammations, previously neglected, were attacked with energy, and without intermission, by the most direct and effective measures. Exactly in proportion as the local diseases were abated, did the intermittent paroxysms decline, and finally disappear; and since they have been completely subdued, vigorous nutrition has been restored with every sign of health.

CASE XI.—*Gastro-entero-pneumonitis, with Cerebral Congestion.* Samuel Robinson, ætat twenty-five, entered the medical wards on the 26th of November. He was taken up by the police that morning, from the street, where he had lain during the night, and brought into the house almost insensible. His lips, gums, and tongue were covered with a thick crust of blood, which was constantly oozing out of them, as well as from the nostrils; face of bronze colour; the skin was hot and dry; pulse full, with little force; the epigastrium sensible to pressure; breathing was laborious, the inspirations being short, and followed by a groan. He was directed to have cups applied to the epigastrium, and an injection to open his bowels.

27th.—More intelligent, and gave some account of himself; he had been a cook on board some of the small craft in the river; had taken cold, and been troubled with a cough and difficulty of breathing for more than a week; acknowledges he is very intemperate; the epigastrium continues tender; the other symptoms remain the same. Bowels were opened by the injection. He was again cupped to the epigastrium and lower portion of chest. In the afternoon he appeared improving in some respects, and thought himself well. As his respiration improved very little, the thorax was explored; the respiration was obscure, and presented the crepitating rattle in both sides. He was ordered to be cupped freely to his chest. Cold has been kept constantly applied to his head.

28th.—More lively this morning; sensation more acute; feels that

he is unwell; exudation of blood continues from gums, lip, and tongue, which are incrustated with it; great tenderness at the epigastrium; skin hot and dry; breathing much improved. Ordered sixty leeches to the epigastrium; cold injections and tepid emollients to his abdomen; hot fomentations to his feet and legs.

29th.—In some respects improved; more intelligent; tongue and lips less incrustated with blood; pulse stronger and less frequent; skin moist, yet rather hot; bowels open several times this morning; he was directed to be dry-cupped over the chest; became excited during the operation, and had scarified cups applied, which drew about \tilde{z} ij. of blood. His breathing was much relieved, and his face lost immediately its dark, red hue.

30th.—Took fifteen drops of laudanum last evening, and slept several hours; tongue less incrustated, and not as dry; breathes easier; pulse remains the same, (132,) varying in fullness and force, according to the difficulty of his respiration; cups were again applied to the chest, and about \tilde{z} ij. of blood were procured.

December 1st.—Breathes easier; took fifteen drops of laudanum, and slept all night; tongue moist, and cleaning from the edges; pulse fallen to 118, and not quite so strong; skin warm; a blister directed to each side of the chest.

2d.—Took laudanum and slept well; blisters drew well; skin natural, in the afternoon perspirable; bowels open; diet chicken water; expectoration commencing; rattle less crepitating, and more mucous. Ordered to take two grains of blue pill, and one-fourth of a grain of opium every three hours.

3d.—Still improving; bowels open once yesterday; skin natural in temperature; perspired considerably last evening; pulse weaker; to have sago to-day in addition to his chicken water; tongue nearly clean and moist.

15th.—Continued to gather strength, and is now walking about the ward; convalescent; diet nearly full.

Remarks.—By the nosologists, this case would have been called typhus fever, by some practitioners, congestive fever, and by others, typhoid pneumonia. Robinson had been affected with cough and difficult respiration, previous to the night he was exposed to the weather.

Cold acting on the surface, diminishes the action of the cuticular capillary circulation; it is struck with torpor; the blood thus repelled, or what is the same thing, no longer called into this extensive surface, the effect of its diminished actions, must be disposed of in some other tissues, in which it accumulates in excess, and thus congestions are established.

When any organs or tissues are the seats of morbid irritations, or by former habits, are constantly maintained in unnatural excitement, the reflux from the surface is attracted to them in preference to any others; for irritation in an organ is like magnetic power, always drawing towards itself the circulating fluid. But the irritation is augmented by this increased afflux of blood, and instead of simple congestion, which would have been formed in a healthy individual, or in one of sober habits, there is lighted up intense and disorganizing inflammations.

Robinson, it is presumable, had already been attacked with pneumonic inflammation, when he was subjected to the exposure, and from his excessive potations, must have had his stomach and brain in an irritated state. These were the organs that were the principal sufferers when he was admitted, together with the mucous tissue of the superior aerial, and digestive passages. The increased quantity of the circulating fluid thrown into these organs, had carried their irritations up to active inflammations, with deterioration of function; hence the difficult, embarrassed respiration, accompanied with groans, the language of pain; hence the sensibility of the epigastrium, and general pain that pressure excited in the abdomen, which called for local depletions, the mucilaginous fomentations and cold injections; hence the coma and diminished sensibility which made him at first scarcely conscious of his illness, but of which he became sensible as the cerebral functions were more fully exercised.

Had the typhoid symptoms been permitted to govern the treatment of this case, without a reference to the pathological condition of the organs; or the name typhus, which few would have hesitated to pronounce in reference to it, been suffered to have possessed any weight, and a stimulating practice been pursued; I have no hesitation in believing, from what I have witnessed in the former practice of this establishment, that a most formidable and disastrous train of symptoms, stamped with true malignancy, would have been generated, with a fatal issue to the patient.

Equally unfavourable would it have been to have looked upon this case, with the Armstrong school, as one of congestive fever, in which the accumulated fluids were to be unlocked by general depletion and the liberal exhibition of calomel.

General depletion, when extensive inflammations have become radical, debilitates the healthy tissues and organs, which have already necessarily a tendency to asthenia from the abstraction of their forces and fluids in favour of the diseased organs by the morbid irritation going on, infinitely more than it diminishes the too great

energy of the inflammatory actions, and thus the economy is crippled in its only certain means of defence, and deprived of its most effective powers of restoration.

The action of diseased organs are to be opposed most successfully, by rousing up and antagonizing against them the actions of the organs or tissues that have not partaken of the morbid condition, it is intended to relieve. By rallying to them the forces and the fluids overwhelming the diseased organs, the most efficient diversion in their favour, it is possible to obtain by art, is then accomplished, and the natural balance of power and action between the organs, overthrown by the disease, is restored to its legitimate order, if restoration be any longer a measure in the range of possibilities. But for the attainment of this object, the organs, the field of our operations must have power; should they be disabled and impotent, from their feebleness, to have excited in them actions of an intensity sufficient to make a decided impression on the economy, this recuperative operation will prove abortive.

General depletion, in fevers, is the remedy to arrest the too inordinate actions of the central organ of the circulation, when its disordered functions threaten to extend their disturbance into the functions of organs unassailed by disease. When this duty is performed, it promises no further advantage; it will not cure, of itself, the disorganizing inflammations seated in the minute and intimate structure and capillary vessels of the organs. Its influence cannot be limited to the diseased organs; it strikes equally those that are sound; and on the diversion effected by their actions, brought about by nature, or established by art, depends the safety of the patient. General bleeding does not co-operate, on the side of the economy, in opposition to the disease by which it is invaded; both equally feel its effects; they are weakened, but their relative positions are the same, and no advance has been made towards removing the disseverance of the natural sympathetic connexions of the organs, and a restoration of the balance of their actions, in which health consists.

The lancet, a remedy admirable, prompt, and powerful, when directed on sound principles, pushed too far, and too exclusively relied on, has been a weapon of destruction, fatal to the lives of thousands. It was the conviction of the injurious results attending on its free employment, that some years past produced the re-action which took place, when, for a period, it was as much denounced as it had been a short time before extolled; the use of this means even fell into perfect discredit, and running into the opposite extreme, the diseases which profuse general depletion had failed to cure, were, on

that ground, subjected to a treatment truly incendiary, and not less hostile to the recuperative operations of the economy.

The principles precedingly indicated, are those on which this case was treated, and on which all those exhibiting similar organic and functional lesions are managed in the wards whilst under our charge. It is not only the greater certainty attending this system which commands for it a preference, but the promptness with which symptoms of a very unfavourable aspect disappear; and of which this case of Robinson presents a striking instance.

CASE XII.—*Pleuro-pneumonia with Gastro-splenitis.* Mansfield, aged thirty-five years, of intemperate habits, was admitted into the clinical ward on the 10th of December.

History.—On last Saturday, (6th,) he fell on his left side, and shortly after was taken with a sensation of cramp in his chest, for which he took laudanum occasionally, with apparent relief; but feeling no permanent benefit, he came to this house. The symptoms on admission were; face of a dusky, bluish hue; breathing short; skin preternaturally warm; bowels open; great tenderness of epigastrium; coughs and expectorates a sanguinolent, viscid fluid; sound of lower part of the left side of the chest dull when percussed; no vesicular respiration; respiration in right lung natural, tongue inclined to be dry, covered with a heavy, yellow fur in centre; no head-ache, except a slight pain caused by coughing. Ordered cups to epigastrium and lower region of left side of thorax; hot fomentations to abdomen; and acidulated gum-water for drink and diet.

11th.—The tenderness of the epigastrium not altogether relieved; pulse frequent and tense. Ordered to repeat cups to the seat of pain. Evening. Relieved from pain; pulse still frequent, but reduced in force; tongue the same as yesterday; skin rather warm and moist; bowels open; takes flaxseed tea, with cream of tartar \mathfrak{z} ij.—tart. antim. gr. ij. to the Oi. and continues the gum and barley water for diet.

12th.—Stomach very irritable, will not retain any thing, except in very small quantities; pulse quick, and rather frequent, 88 per minute, without much tension; tongue red at tip and edges, centre covered with yellow fur, and a great tendency to dryness; skin rather dry; omit flaxseed tea, and confine him exclusively upon gum and barley-water, and continue hot fomentations.

13th.—Worse this morning; prostration; great tenderness of the epigastrium; eyes injected; breathing short and frequent; pulse active, frequent, and rather tense; tongue very dry, incrustated with a brown

fur in centre, edges very florid; face flushed; skin rather warm; vesicular respiration on the right side, and on the left, bronchial mucous rattle; was ordered venesection $\frac{3}{8}$ viii. but not more than $\frac{3}{8}$ iv. could be taken, owing to the sinking of the pulse; eighty leeches were ordered to the epigastrium and lower part of his chest. Evening. Worse; is very restless; appears to be in great agony; pulse frequent and quick; tongue the same; gurgling mucous rattle in both lungs. Opium gr. iv. and calomel gr. vi. every hour, and immediately an injection of sixty drops of laudanum, and to continue afterwards injections of brandy every hour; he continued to sink, and died about ten o'clock, P. M. Case reported by Dr. CLARK.

Autopsy.—Examined next morning. Body not emaciated; face dark hue, from venous blood. Thorax. The right lung collapsed, crepitating, contained in bronchial tubes some frothy mucus; the left lung did not collapse, felt solid; adhesion of pleural surfaces; when laid open, it presented the three stages of pneumonia; the superior part of the upper lobe was crepitating, more congested with blood than natural, and a watery mucus was contained in the small bronchi and vesicles; the middle of the lobe was hepatized, and the line separating the two stages was perfectly well defined; the bronchi contained a reddish, purulent fluid; the lower lobe was nearly disorganized—it was infiltrated with reddish, purulent matter, and the substance of the lung, though solid, softened down to such a degree as to tear, when slices were held up, by their own weight; the pericardium contained about $\frac{3}{8}$ ii. of yellow serosity; the heart of usual size. In the pulmonary artery, its ramifications, and right ventricle, there existed a solid coagulum of fibrin, perfectly white, dense, and firm in consistency, and presenting a fibrous structure when torn, which required a considerable effort. It was very evident from its characters that this coagulum could not have been formed in the few hours since death, but must have existed some time previous thereto. A similar coagulum, quite free from colouring substance, but of much less consistency, was found in the left ventricle, and in the aorta; and which most probably was also formed previously to death. Abdomen. Liver natural; spleen very large, so much softened it tore to pieces in attempting to take it from its place, and would not bear its own weight. Stomach. In cardiac region mucous tissue reddened in stellated patches, which were permanent; the tissue, natural consistency and thickness; alimentary canal, no morbid appearances of consequence.

Remarks.—In this is presented a case of pneumonia advanced to the third degree, complicated with inflammation of the spleen, which had progressed to its last stage, and with gastritis. Mansfield,

extremely intemperate in his habits, like most of those individuals, could give but an imperfect account of the earlier periods of his disease, and it is doubtful whether it was caused by the fall and blow he received on the chest, or whether a chronic disease was only aggravated by that accident. Those who are habitually under the influence of liquor, have their sensibility so much blunted, they are often unconscious of the extent of disease under which their organs are suffering, until disorganization has taken place. I cannot but hesitate in believing that the hepatization of the middle portion of the left lung, and the softening of the lower half of the lung, had been effected in the short time from the accident to his admission.

The spleen in this case entered largely into the production of the morbid condition. The diagnostic signs of acute inflammation of the spleen, are not well established; it is not improbable that some of the pain referred to the epigastrium may have proceeded from this organ. The complications of this case do not permit any inferences to be drawn as to the symptoms which belonged to the inflammation of the spleen. The entire disorganization of this organ, it is probable, was more immediate in hastening the dissolution of the patient than the state of the left lung, as the right was fully adequate to the purposes of respiration, and I have seen patients survive a much longer period, with one lung as highly diseased as in the present instance.

The coagula, or polypus concretion in the heart and large vessels, I am disposed to regard as the more immediate cause of death in this case. This is not an uncommon circumstance; I have seen repeated instances of a similar kind. The cause of the formation of these coagula during life, is not known, but it frequently occurs in disease, and becomes the immediate cause of the fatal termination. The agony of Mansfield resembled that which attends dissolution from obstructions in the circulation of the heart, and the body had the same appearance as is presented by those who perish from that cause.

CASE XIII.—*Gangrene of Right Lung*. Richard Harrison, aged forty-three years, was admitted on the 20th of November, in the cells with mania a potu, for which he was treated with the usual remedies, and entirely recovered. On the 26th, complained of pain in his right side; pulse frequent and tense; was ordered to be freely cupped over seat of pain. Next morning felt greatly relieved, but his eye being much inflamed, and having an ulcer on the cornea, he was ordered to the eye ward, where he was principally treated for that affection; the cups were repeated twice to his chest with advantage; he also made use of a common cough mixture, and drank freely of flaxseed tea,

containing supertart. of potash, ℥ij.—tart. antim. gr. ij. His diet being gum-water and gruel. Was removed into clinical ward.

December 12th.—On examination of his chest, percussion elicits a very flat sound all over the right side, and no respiration can be heard in that lung; he coughs very often, and brings up with difficulty a viscid, thick expectoration, some of which adheres to the vessel when reversed; tongue covered with a thick, dark fur; pulse frequent and irritated; bowels much disordered; abdomen tense; breath fetid. Ordered tinct. opii. ℥iv.—tart. acid. gr. xii.—water ℥ij.—tea-spoonful occasionally. Evening. Much worse; cough almost constant. On examination, gangrene of the right lung suspected. Ordered opiates to be freely given.

13th.—Continues to sink; respiration can be heard all over the room; pulse very small and frequent; tongue very foul, and breath extremely fetid; diarrhœa has supervened; he continued to take opiates; but he gradually sunk, and died about 12 P. M.—Case reported by Dr. CLARK.

Autopsy.—An examination was made of the body, but limited merely to the thorax, in order to determine the condition of the lungs. The left collapsed when the sternum was raised, and was perfectly natural in structure. The right exhibited the appearance of a soft, grumous mass, of black colour. No adhesions of the pleura existed. On attempting to remove the lung from the cavity it was ruptured, and the lower and middle lobes exhibited the semblance of a quantity of putrid coagulated blood, and exhaled a most offensive odour.

Remarks.—This case offers another instance of the extreme disorganization which may occur in the viscera of drunkards, without exhibiting premonitory symptoms to induce a suspicion of the intensity of the disease. Harrison was brought to the infirmary for the third or fourth time with mania a potu. At this period he had no cough of consequence, and attention was not directed to his thoracic organs. It is, notwithstanding, most probable, that he was then labouring under the pulmonary affection that terminated his existence. As the symptoms of mania subsided, some cough was noticed, but it could not have been urgent, as the resident physician did not direct my notice to it. Being transferred to the eye ward, he was not under the observation of the medical attendants, until he was brought into the clinical wards, two days previous to his death.

The affection of the right lung approaches in its anatomical characters to the uncircumscribed gangrene of LAENNEC, which he states “may be placed in the number of the most rare of the organic diseases.” This morbid organic affection occurred but twice in the extensive researches of this eminent cultivator of pathological anatomy

in a space of twenty-four years; and but five or six instances of it had been met with in the hospitals of Paris.

At first it might be looked upon as pulmonary apoplexy; but this disease is always in circumscribed spaces of the lung, and is accompanied with profuse hæmoptoë, which in this case was absent.

Table showing the Number of Persons admitted into the Medical Wards of the Infirmary of the Alms-house of the City and County of Philadelphia, and the Number of Deaths, between the 3d of December, 1827, and the 1st of December, 1828.

DATES OF ADMISSION.	MEN'S MEDICAL WARDS.		WOMEN'S MEDICAL WARDS.		CELLS.*	
	No. ad- mitted.	Deaths.	No. ad- mitted.	Deaths.	No. ad- mitted.	Deaths.
From 1827, Dec. 3, to 1828, Jan. 7	149†	17	149‡	13	24§	1
To February 4 -	96	11	46	9	22	1
To March 3 - -	60	9	61	3	26	2
To April 7 - -	71	12	47	10	27	2
To May 5 - -	46	9	55	4	33	1
To June 2 - -	76	8	46	9	30	2
To July 7 - -	64	12	45	10	24	5
To August 4 -	62	8	47	6	31	11
To September 1	100	10	64	10	19	4
To October 6 -	177	13	114	10	57	6
To November 3	145	7	88	6	24	6
To December 1	116	10	79	11	32	3
Totals - - - -	1162	126	841	101	349	44

Remaining Dec. 1st, 1828, in Men's Medical Wards, 54; in the Women's Medical Wards, 79; in the Cells, 11.

RECAPITULATION.

Treated in men's medical wards	-	-	-	-	-	1162
Deaths	-	-	-	-	-	126
Per centage	-	-	-	-	-	10.84
Treated in women's medical wards	-	-	-	-	-	841
Deaths	-	-	-	-	-	101
Per centage	-	-	-	-	-	12.
Treated in cells	-	-	-	-	-	349
Deaths	-	-	-	-	-	44
Per centage	-	-	-	-	-	12.6
Whole number of patients treated	-	-	-	-	-	2352
Deaths	-	-	-	-	-	271
Per centage	-	-	-	-	-	11.47

* Most of the patients in the cells are admitted for mania a potu.

† This number includes 88 in the wards, December 3d, 1827.

‡ This number includes 56 in the wards, December 3d, 1827.

§ This number includes 8 in the cells, December 3d, 1827.

ART. VI. *Case of Tetanus.—Respiration performed by one Lung, with Vigorous Nutrition and General Health.* By SAMUEL JACKSON, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.

I WAS requested to visit Henry Davis, an apprentice to Mr. F. printer; Saturday, March 22d, 1828. About two weeks previous, while running through the yard, he struck his thigh against a splintered board projecting from a fence. A small superficial wound had been made in the skin, and was dressed with adhesive plaster. On Monday, the 17th, he complained of a pain in his neck, and of sore throat, but continued to attend to his duties. Friday, 20th, was so much worse he was confined to bed. An emetic was given, and followed by a purge, which did not open the bowels: was very unwell during the night, and early in the morning calomel, grs. x. was administered.

This lad was twelve years of age, had enjoyed good health since he had been in the city, which was three years, and had walked from Pittsburgh to Philadelphia. He was well made, stout limbed, and active.

When I saw him first, I found him labouring under the opisthotonic form of tetanus. The jaws were firmly fixed, the head drawn back, the body forming an arch, the abdomen tense and hard, breath fetid. The wound in the thigh was very healthy in appearance, and had nearly cicatrized; it gave him no pain. I examined it well, but could find no splinters in it.

A tourniquet was applied round the thigh, above the wound, an injection given to open the bowels, and the spine directed to be covered the whole extent with leeches. A small number only could be obtained, the stock in the city having been nearly exhausted through the course of the winter's practice. Failing in the means to press this plan of treatment, the opiate method was adopted: two hundred drops were given, to be repeated every hour and a half, increasing fifty drops with each dose. The spasms continued to augment in intensity; the laudanum appeared to occasion no marked effect, except some confusion of intellect, but he constantly gave correct answers to questions. He expired at 9, P. M. having taken one thousand five hundred drops of laudanum since twelve o'clock.

Autopsy, eighteen hours after death, was performed the next day, by Doctor HORNER, Adjunct Professor of Anatomy, with his usual accuracy and minute observation.

The body was well proportioned, and rather large for the age of the individual; discoloration of back, sides, and neck, from settling of blood; muscles of extremities rigid, those of the neck relaxed; right side of the thorax, rounded, fuller and larger than the left, which was contracted.

The skin of the thigh, where the wound was situated, was dissected off. On the inner surface there was no mark of injury or appearance that the wound had extended through the skin. The fascia covering the muscles presented no alteration to the eye; when raised a small discoloured spot, the size of a pea, existed on the under surface, which was covered with fetid pus; the muscular fibres in immediate contact were hardened and inflamed, for about the space that would be covered by a sixpence. The fascia was separated into layers, and in its substance was found imbedded a small splinter of wood, an eighth of an inch in length, and two lines in width.

Brain.—The dura mater being raised, the veins were very turgid, and when the brain was removed, the blood ran freely from the vertebral veins and jugulars, when the head was pendent. The arachnoid was perfectly transparent, but remarkably arid; it felt as though it had been wiped with a dry cloth: this appearance particularly attracted the attention of Doctor Horner and myself; neither of us had met with it previously. The vessels of the pia mater were turgid and congested with blood.

The cortical substance of the brain was darker coloured than is common. The medullary substance exhibited numerous reddened spots, formed by oozing of blood from the extremities of divided vessels. It was very firm, not a particle of fluid was contained in any of the ventricles. The cerebellum and medulla oblongata offered no unusual appearances.

Spinal marrow.—The spinal canal was laid open to the last lumbar vertebra. The arachnoid and pia mater were natural in appearance; the vessels in the last very full of blood, but which might be attributed to the position of the body: no fluid existed in the canal. The spinal cord was removed and carefully examined; like the brain, it was uncommonly firm, but offered no positive pathological condition.

Thorax.—The heart was of natural size and consistency: all its cavities were empty, no coagula of blood in them. The right lung was very large, crepitating, in perfectly natural state as was also its investing serous covering. The left lung was compressed into a solid mass, about the size of the fist, but no otherwise changed in structure than what resulted from its condensed state; and the cavity which it

left, was filled with cellular tissue, apparently produced by lymph having been effused, and subsequently organised.

Abdomen.—Stomach and intestines, except lower portion of ileum which was contracted, distended with flatus. Stomach contained the fluids, and milk coagulated, he had drunk before death. It was very much distended; cardiac extremity, where the contents were principally contained, was of faint red colour; no injection of vessels; the mucous tissue of this portion softened so as to peel off by scratching it with the nail; in the other portions of the stomach it was whitish, thicker than is commonly seen, natural firmness. Small intestines contained no fæces; the mucous tissue of natural whitish colour and consistency: large intestines loaded with liquid, greenish fæces; the tissues of natural aspect.

The liver and spleen exhibited nothing different from their usual state.

Remarks.—A circumstance in this case, worthy of remark, is, that one lung alone performed the office of respiration, and was perfectly adequate to all the purposes of hæmotosis, and of healthy nutrition, and not incompatible with the possession of robust health. The period when he had suffered the attack of pluritis, from the effusion of which the left lung had been compressed, and had not again expanded, could not be ascertained. He had never spoken of any severe illness, previous to coming to the city, and he had enjoyed full health during the three years he had resided in Philadelphia.

The points in this case that invite attention, are, 1st. The wound was healthy and rapidly cicatrizing, and it is not presumable the irritation which excited the tetanic affection emanated from this source; 2d. The minute splinter in the fascia, around which unhealthy pus had been formed, it is probable was the point whence the irritation was transmitted to the spinal marrow; 3d. An unusual aridness of the arachnoides and firmness of the brain and spinal marrow, were the sole appearances that could be connected with the pathological state; and 4th. That a fatal tetanus may result from an irritation of the spinal marrow or brain, not sufficient to the excitation of inflammation or alteration of structure.

ART. VII. *On the Diseases of the Cornea.* By ISAAC HAYS, M. D.
one of the Surgeons of the Pennsylvania Infirmary for Diseases
of the Eye and Ear.

THE impulse given to the study of pathology by BICHAT, and so successfully pursued by his followers, has not only entirely changed the character of this department of medicine, but imparted a new aspect to the whole science, which is no longer composed of departments, having no dependance or connexion with one another, but consists of a single structure, of which anatomy is the basis, and physiology, pathology, and therapeutics constitute the successive superstructures.

Pathology formerly consisted in little else than uncertain groups of symptoms, to designate which an endless variety of names were appropriated—for as these groups were founded on no certain bases, they were incessantly varying—new terms were necessarily required—no certainty could be attained in reference to the application of names previously given, and hence the inextricable confusion and absurdities of nosology.

Every disease must consist in organic derangement, and this may be considerable, or so trifling, as not to be cognisable to our senses, or such that the powers of the system are sufficient to effect restoration; in these latter instances it has been erroneously considered as mere disorder of function, for it is impossible to conceive of any derangement of function without an equivalent alteration of structure. Modern or physiological pathology is based on these morbid changes; symptoms are viewed merely as referring to, or as the means of arriving at a knowledge of these derangements; and semeiology has become a subsidiary department of pathology. Certain assemblages of symptoms are no longer looked upon as a disease, but as “evidences of things unseen,” by reasoning from which, we arrive at a knowledge of the disorganizations by which they are produced, and the disease itself is thus kept in view, and is a principal object, instead of the signals by which it is made known. Semeiology has become more certain and fixed, and pathology infinitely elevated in importance, since it forms the only true basis of therapeutics; an acquaintance with the precise nature of the derangements, and the manner in which they are effected, constituting an essential preliminary to a knowledge of the means of correcting them, the great end of the healing art.

No class of diseases were involved by the old pathological doctrines

in more utter and apparently inextricable confusion than those of the eye. So embarrassed were the descriptions of these affections, and so forbidding their nomenclature, that the medical student turned from the study of them in hopeless disgust, and for a long time their treatment was abandoned to itinerant practitioners. Physiological medicine has thrown a new light upon these complaints; some of the most distinguished men in the profession are engaged in their investigation, and ophthalmic diseases must soon be as thoroughly understood as those of any other organ.

In the preceding series of this journal we attempted to withdraw the diseases of the conjunctiva, sclerotica, and iris, from the obscurity in which they were involved, by applying to them the lights of physiological pathology; on the present occasion we propose making a similar attempt in relation to the affections of the cornea.

When it is considered that the integrity of this part is essential to the exercise of one of our most important senses—that its diseases illustrate those of vital organs, and which cannot during life be subjected to examination—and that the most erroneous ideas are entertained respecting its pathology,* though its situation and structure afford singular facilities for the study of its diseases—this essay, should we merely succeed in attracting attention to the subject, will not be without value.

The cornea consists of three distinct tissues; an external covering which is a continuation of the conjunctiva; its proper substance; and an internal lining membrane.

The conjunctival coat of the cornea is a mucous membrane, extremely delicate, transparent, colourless, devoid of epithelium, and, in a healthy state at least, exhibits no villi or follicles. It is abundantly supplied with blood-vessels, and is united to the subjacent cornea by a cellular tissue, which is too short to be demonstrated. From no villi or follicles being perceptible in it, and its acute inflammation usually terminating in effusion of lymph, as in serous tissues, it is regarded by some pathologists as belonging to this class, while others consider it a sero-mucous membrane. It certainly is more closely connected with its subjacent tissue than any other of its class, and suffers considerable modification of character; but we are inclined to consider it still as essentially a mucous membrane, lymph never being

* It has been gravely asserted by a distinguished surgeon of Edinburgh, in a paper only recently published, that ulcer of the cornea arising from gonorrhœa, differs from that produced by any other cause, and may be distinguished by its *shape*. We may safely leave the refutation of this absurdity to the good sense of our readers.

poured out from its free surface as in serous tissues, but always in its substance, or into the subjacent cellular tissue.*

The second coat, or the proper substance of the cornea is a transparent, insensible, elastic, fibro-cartilaginous tissue, and consists of two portions. The external portion is composed of a number of concentric or parallel lamina, connected by a cellular tissue, the cells of which are filled with an unctuous fluid, having all the characters of the imperfectly coagulated, diaphanous mucus, which occurs in the centre of the inter-vertebral fibro-cartilages. This cellular tissue is abundantly supplied with absorbents. By boiling the cornea, we obtain gelatine similar to that obtained from the other fibro-cartilages. M. GENDRIN,† in his admirable work, informs us, that when we tear the cornea after macerating it for a long time in a mineral acid, it ruptures parallel to its circumference, as if by the separation of concentric fibres; it is, however, impossible to render these fibres visible, but M. G. thinks that the above experiments, and several pathological considerations prove their existence. The internal portion is very dense, and is united to the other by cellular tissue. It is very important to bear in mind these two divisions, as the pathological phenomena which they exhibit are somewhat different, and in consequence of the greater density of the internal lamina, it is much more difficult to penetrate with cutting instruments than the exterior ones, and in operating for cataract by extraction, the knife is apt to be turned by the former portion, and the instrument, instead of passing through the anterior chamber is inserted between the two portions of the cornea we have described. The blood-vessels of this coat are derived from the sclerotica, and in a healthy state, like the vessels of the other parts of the cornea, they carry a colourless fluid.

The third tissue is an extremely delicate serous membrane, which lines the internal surface of the cornea, and is intimately attached to it. The existence of this membrane has been denied by some anatomists, and it must be confessed that no one has succeeded in demonstrating it by dissection,‡ but its existence is rendered highly probable

* At least we have never seen filaments of lymph formed on its free surface as occur in serous membranes, and if it ever happens, it cannot be of more frequent occurrence than in other mucous membranes, as on the laryngeal mucous membrane in croup, &c.

† *Histoire Anatomique des Inflammations*, Vol. I. p. 331.

‡ Charles Bell, however, says in his *Anatomy*, Vol. III. p. 249, London, 1803, "after maceration, I have found raised in the fluid a very delicate and transparent membranc from the internal surface of the cornea."

from analogy, and is we think, proved by several pathological phenomena which we shall indicate hereafter.

We have thus briefly noticed the anatomical structure of the cornea, and the physiological characters of the tissues which enter into its composition; we shall now attempt to trace the pathological changes effected in these tissues by disease, and their treatment.

I. Inflammation of the Mucous Covering Membrane.

1st. *Acute Inflammation.*—The first change produced in the mucous membrane of the cornea by acute inflammation, is a slight loss of transparency, arising from too great a fullness of its serous vessels. This being the effect of simple congestion, is immediately removed on the restoration of the circulation. If the irritation, however, is continued, the colourless vessels become so distended as to admit red blood, and they can then be readily distinguished. Around these vessels there is an effusion of coagulable lymph, producing at first a slight cloudiness; but as the inflammation advances more lymph is poured out, the conjunctiva becomes of considerable thickness, opaque, loses its smoothness and polish, and finally the vessels become varicose, transmit red blood, the lymph is organized, and the natural appearance of the conjunctiva is entirely destroyed.

The inflammation may be arrested at various periods of its progress, the absorbents take up the effused lymph, and the transparency of the conjunctiva be entirely restored. The degree of opacity removed by these vessels is often surprising, especially in children. We have seen in infants in whom the whole conjunctiva of the cornea was thickened and opaque, in consequence of puriform inflammation immediately after birth, the lymph entirely absorbed, and the transparency of the cornea perfectly restored.

The indications of cure are first to arrest the inflammation, and then to promote absorption. The first is to be accomplished by general and local depletion, revulsives, and diet. In healthy individuals, general depletion is to be preferred to local; when the patient will not, however, bear the former, or after it has been employed to sufficient extent, topical depletion may be had recourse to, and for this purpose we usually prefer cups, which may be applied to the temples or behind the ears and back of the neck; the former situation is usually the best: or leeches may be placed behind the ears, but not to the eyelids as usually recommended; we have never seen them applied there in the early stages of acute inflammation of the conjunctiva, that they did not aggravate the mischief.

The bowels are to be kept open by saline purgatives, and the most rigid diet enjoined.

After the violence of the inflammation has been subdued by these measures, blisters will be found serviceable; earlier than this, however, they invariably do mischief. They may be applied behind the ears, to the back of the neck, to the temples, or to the arms or legs; the two first situations are usually to be preferred; after the inflammation has been entirely subdued, and we wish to institute a permanent drain, they may be applied to the arms or the legs, especially the former, with advantage; or a seton will answer this last purpose exceedingly well. As revulsives in the earlier stages, pediluvia will be found useful.

When the inflammation is dissipated, stimulants must be applied to the cornea to promote the absorption of the effused lymph, and for this purpose an immense number of remedies have been recommended; the best are the nitrate of silver, the red precipitate ointment, the corrosive sublimate, and sulphate of copper. I prefer of these, the nitrate of silver, which should be employed in solution, one to four grains to the ounce of *distilled* water, dropped into the eye several times a day. This solution soon decomposes unless kept from the air and light; as soon, therefore, as it assumes a reddish colour, and small particles are seen floating in it when shaken, fresh should be prepared. The corrosive sublimate is used in solution, one or two grains to the ounce of distilled water. Much difficulty is often experienced in applying these solutions to the eye; it may be accomplished with great ease by means of a small quill or glass tube about two inches long, which should be introduced half way into the solution, and the upper orifice then closed with a finger; the eyelids are to be separated, and the lower end of the quill or tube placed near the cornea; the finger being now removed from the orifice, the fluid will flow out. Great care should be taken not to employ these remedies too early, that too much action be not excited by them, and that it be only temporary; otherwise, instead of absorption being promoted, there will be an increased deposition of lymph.

DUPUYTREN, we learn, is extremely successful in the treatment of opacities of the cornea. He removes the inflammation by the usual remedies, and then orders to be blown into the eye equal parts of prepared tutty, sugar candy, and calomel mixed together and reduced to an impalpable powder. This he continues for several weeks, and it is said he seldom fails to effect a cure. If the opacity is very old and large, he introduces a seton into the back of the neck, and the powder is blown into the eye some minutes at a time.

In several cases of extensive opacities of the corneal conjunctiva, of long standing, we have employed with great advantage finely powdered loaf-sugar and calomel, applied to the spot with a camel's hair brush.

Local stimulants will not, however, always succeed in effecting absorption; when this is the case, mercury should be resorted to, but not to the extent of producing salivation. We usually prefer the calomel in combination with tartrate of antimony and nitre; the proportion of nitre being larger than in the common nitrous powders. Few opacities, except in very depraved constitutions, or where the lymph is organized, will resist the judicious employment of this combination; with a solution of nitrate of silver, to the eye, or the calomel and loaf-sugar, together with a drain established by a seton in the neck, or a perpetual blister to the arms. It is, however, often necessary to continue these remedies for a considerable time.

2d. *Chronic Inflammation.*—In chronic inflammation the blood-vessels soon become varicose, convey red blood, and anastomose frequently. The effusion of lymph is usually more general than in acute inflammation, producing a general opacity and thickening of the conjunctiva; this membrane seems to lose its close attachment to its subjacent tissue; the cornea becomes affected, and frequently “resembles in appearance the green colour which is presented by the fracture of common gunflint; sufficiently diaphanous to admit the perception of light, yet too opaque to render external objects visible to the patient, excepting by their shadows, rendering it impossible to ascertain the colour of the iris, or distinguish the limits of the pupil.”*

In the treatment of this inflammation, general blood-letting will be found of little service; topical depletion is much more useful. The solution of nitrate of silver should early be resorted to, and afterwards the solution of corrosive sublimate or the red precipitate ointment may be substituted, if the first does not succeed in effecting a cure. Blisters are useful, and in some cases we have seen them applied with advantage over the eyelids. The varicose vessels should be divided with a knife, or elevated with a small hook and a portion cut out with scissors.

This inflammation is often excited and kept up by a granular state of the eyelids, in others by the inversion of the lids, in such cases we need not expect a cure until the cause producing it is removed.

Preternatural Growths produced by Chronic Inflammation.—Circumscribed tumours, of a dense and firm texture, are sometimes formed

* Vetch. A Practical Treatise on the Diseases of the Eye, p. 68.

upon the conjunctiva of the cornea, and attain a considerable magnitude, but such cases are rare. Mr. TRAVERS says that he has "excised the anterior hemisphere of the eyeball in an elderly lady, in whom the cornea was concealed by a tumour of a dark purple colour, protruding to such an extent between the eyelids, as to occasion great inconvenience and deformity. It had the appearance of being disposed in lobes, somewhat resembling a bunch of currants of unequal size. On dissection, the cornea and sclerotica proved to be entire, and the morbid growth lying upon and adhering to the corneal and a small portion of the sclerotic surface, had acquired the lobulated appearance, as if by degeneration of the covering conjunctiva; for delicate white bands, the only vestiges of this membrane, were seen intersecting the lobules at irregular distances, in the form of septa. The substance, on section, was firm, of a dark colour here and there mottled with white, and measured a quarter of an inch in thickness, from the external surface of the cornea."*

3d. *Vesicular Inflammation*.—In certain cases of mild inflammation, the serous vessels pour out a fluid either in the substance of the conjunctiva, or in its subjacent cellular tissue. This secretion is very circumscribed, and forms small diaphanous vesicles, which usually burst, discharge their contents, and leave an ulcer.† This may extend to the proper coat of the cornea, or the breach may be repaired. This reparation may be effected by the lymphatic vessels, and without any red vessels being visible, most frequently, however, blood-vessels may be seen running to the ulcer, these deposit a yellowish lymph, which is sometimes removed by the absorbents, at others remains, forming an opaque cicatrix.

This inflammation is to be treated by topical depletion, revulsives, and astringent washes, the best of which are the nitrate of silver and sulphate of copper.

4th. *Pustular Inflammation*.—Pustules are not unfrequently formed in the conjunctiva of the cornea, and as in other mucous membranes, they are the result of inflammation of mucous follicles; we are inclined to consider them here as the consequence of follicular inflammation, though follicles have not been as yet demonstrated in this part. It may be supposed by some, that these pustules are mere abscesses; we cannot, however, consider them as such, since they do not exhibit the common appearances, nor follow the usual course

* Synopsis of the Diseases of the Eye, p. 102, ed. 3d. London, 1824.

† This affection has been described by Gendrin. Op. cit. Vol. I. p. 523.

of abscesses, and they often occur as concomitants of unquestionably follicular inflammations, as small-pox, aphthæ, &c. These pustules are usually situated near the margin of the cornea. At the very commencement of this inflammation, minute fasciculi of vessels presenting a triangular form, may be perceived running upon the cornea, and at the point of each plexus a pustule forms. At first, this pustule appears in the form of a dusky, yellow, or reddish spot, a little elevated above the surface of the cornea, and in a short time becomes a conical tumour. Coagulable lymph is secreted around the fasciculi of vessels, and the cornea in the vicinity of the pustule becomes more or less dense. The vessels always run in fasciculi, pointing towards the pustule, and the redness is never diffused, as in common, acute, or chronic inflammation. This disease is attended from the commencement with pain, usually very acute, and lachrymation; these subside as the disease advances. If the inflammation is not now arrested, a straw-coloured purulent fluid is secreted in the pustule, its apex ulcerates; it discharges its contents, and an ulcer is left, the edges of which are opaque. The ulceration may extend to the cornea, or restoration take place; this latter is effected by the effusion of coagulable lymph, which becomes organized, and the surplus is either absorbed, or an opaque cicatrix is left.

The inflammation in this disease is very apt to return on any slight irritation. In some cases where it returns frequently, the pustule seldom ulcerates, but disappears gradually, after having remained a few days.

This disease sometimes occurs simultaneously with, and appears to be connected with small-pox, aphthæ, and similar affections; at others, it appears to be produced by some circumscribed local irritation, or to be dependant upon a peculiar diathesis or state of the constitution. It usually occurs in children, and sometimes spreads through schools and large families; it is met with, however, in persons of all ages. These pustules bear some analogy to the aphthæ observed in the cavity of the mouth, on the tongue, lips, and on the internal surface of the intestinal canal, and Professor HIMLY says that at a time when aphthæ of the throat were very frequent at Brunswick, he also found many small vesicles beginning with an inflammation of the sclerotic coat, and also sometimes, but more rarely of the cornea. Once he saw a whole family affected with this disease, one after another. "It was," says he, "a true catarrhal affection, and in some cases these vesicles disappear by diaphoretic medicines, in some by blisters, camphor, and antimony, without any local application, except mucilaginous ones. I think that it is just the same disease as aphthæ of

the intestinal canal, of the corona of the glans penis, and other fine continuations of the external skin. Those on the cornea become worse if they are opened, and if they open themselves and form ulcers, they generally dry up by means of borax and white vitriol, but if they are neglected, they cause sometimes considerable ulcers which are very obstinate and hurtful to the cornea.*

In the treatment of this inflammation, general blood-letting is not often demanded; topical depletion, however, is almost always useful, and this may be effected either by cups or leeches. The bowels should be kept open, and for this purpose we prefer in the first instance calomel, and then a mixture of pulv. rhei and creta ppt. Blisters are also useful, and they should be applied to the back of the neck, behind the ears, or to the arm, and kept open. If the pain is very violent, fomentations will sometimes afford considerable relief. After the inflammation is reduced by these measures, the astringent collyria should be employed; the best is the solution of nitrate of silver. In the very onset of the disease it is also useful, and should the patient be seen early enough, by touching the plexus of vessels with the argent. nit. and administering at the same time a smart purgative, the disease may occasionally be arrested. In the latter stages of this disease the vinum opii has been strongly recommended. We cannot say any thing respecting its value from our own observation, as we have little experience with the remedy in ophthalmic inflammation. In a few instances in which we employed it, we derived little or no advantage from it, and therefore have not persevered in its use, but it has been so highly extolled by respectable writers, that its utility in some cases can scarcely be doubted. When the pustule is evidently filled with pus, and there is no prospect of its being absorbed, it is better to open it at once carefully with a sharp cataract needle. The ulcer that is left may be cured, and the absorption of the lymph promoted by the judicious use of the nitrate of silver and revulsives.

5th. Ulcerative Inflammation.—The conjunctiva bears the same relation to the cornea that the synovial membrane does to cartilage, and pe-

* We have made this quotation, (for which we are indebted to Wardrop's valuable essays on the morbid anatomy of the human eye, never having seen the original,) with some hesitation, as the disease is termed vesicular. Whether the affection consisted of true pustules or really were vesicles, or whether an error has been committed by the author or the translator, we are unable to determine: but as the swellings are said to resemble aphthæ, which are true pustules, i. e. inflammations of cryptæ, we are inclined to believe that there is a mistake somewhere, and that the disease consisted of pustules.

riosteum to bone, and like these membranes, it is much less disposed to ulcerate than the part it covers. Ulcers, however, do form in it, and they are described by M. GENDRIN,* as always commencing by the formation of a very small tubercle, at first red, very little prominent, and soon of an ashy white. This small tubercle, which is produced by inflammatory effusion into the conjunctiva, has been often mistaken for abscess beneath or in the thickness of the conjunctiva. As soon as the ulceration has destroyed this tumour, we see a solution of continuity having elevated edges, livid red, irregular, and at the base grayish. It remains in this state during the existence of the inflammation, but when cicatrization is about commencing, the edges of the ulcer become less prominent, the redness less livid, the base of the ulcer assumes a reddish appearance, the size of the ulcer diminishes, and if it has not extended beyond the thickness of the cornea, it appears like a slight excoriation. This may be the usual appearance and progress of ulcers of the cornea, but they certainly do not always commence in this manner. They often succeed vesicular and pustular inflammation; and we have seen them apparently produced by a real ulcerative absorption, the cornea exhibiting no apparent loss of transparency, and no coloured vessels or lymph being visible.

Eliza Davis, ætat thirty, servant, applied to the Pennsylvania Eye Infirmary, January 30th, 1824. She had slight inflammation of the conjunctiva of one eye, and an indistinctness of vision, for which there was no visible cause. By the loss of a little blood, purging, and low diet, the inflammation abated in a few days, but the indistinctness of vision increased. At this period the cornea, though transparent, did not present a perfectly natural appearance, and on carefully examining it in certain positions, a very minute, irregular depression was observed by the irregular reflection of the light. On examination with a microscope, at least fifty ulcers were seen on the cornea, all so minute that they could not be perceived by the naked eye; the one at first seen was evidently formed by the union of three or four. These ulcers remained for several weeks, but ultimately entirely healed. At no period was there any effused lymph or red vessels to be seen on the corneal conjunctiva.

Mr. RYALL is, we believe, the only writer who has noticed these minute ulcers.†

* Op. Cit. Vol. I. p. 683.

† Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, Vol. V. p. 2.

The first object to be attained in the treatment, is the reduction of the inflammation, and next to promote cicatrization. The first is to be accomplished by the usual antiphlogistic measures, and for the second, the best remedy is the solution of nitrate of silver. Mr. Ryall says* that he has “not unfrequently known patients of weakly, strumous habits to have been condemned to long confinement in darkened apartments, to a strict antiphlogistic regimen, and even to the influence of mercury, whose miseries might have been in a great measure curtailed, had the precise nature of their complaint been timely discovered, and the nitrate of silver applied.” These measures will usually effect a cure; should they fail, and the ulceration involve the proper lamina of the cornea, we shall point out the treatment when we come to consider the ulcerative inflammation of this part.

II. *Inflammation of the proper tissue of the Cornea.*

1st. *Acute inflammation.*—The first step of acute inflammation is evinced by engorgement of the vessels of the part, and in the cornea it becomes visible by a slight haziness or loss of transparency. At this stage, resolution may take place by the contraction of the lymphatic vessels to their original diameters; but if the disease progresses, the vessels become distended, and first admit a dense coagulable lymph, and then the red globules of the blood and deep-seated vessels may be seen in the substance of the cornea, always running from the circumference towards the centre of the part. These vessels are usually most visible at the junction of the sclerotic coat with the cornea, and on close observation they may be seen forming at this part a beautiful red zone of rectilineal vessels, which zone is very different from that occurring in iritis; the latter being formed by anastomosing vessels, and situated a short distance from the cornea, leaving a whitish zone within it. The inflammation may terminate in effusion of coagulable lymph, or a puriform lymph, usually succeeded by ulceration, or the action may be so violent as to produce gangrene or sloughing; in some few cases blood has been effused between the laminæ of the cornea. The lymph is generally deposited in the cellular tissue connecting the laminæ; and the extent of this effusion varies, sometimes being confined to a small space, at others occupying the whole of the cornea. If the inflammation has not been very violent, or is early arrested, the lymph may be removed by the absorbents, and the transparency of the cornea in great part, or even entirely restored; sometimes, however, the lymph be-

* Op. Cit. p. 3.

comes organized, and red vessels may be seen ramifying through it. If the inflammation is severe, and continues for any length of time, considerable disorganization is produced, the cornea swells, its vessels become varicose, and transmit red blood; its laminae are separated, coagulable lymph is effused in their substance and between their laminae, and the whole cornea becomes thickened, opaque, and spongy. The pain that attends this disease is very various, and seems to depend upon the extent to which the sclerotica and the internal tissues are involved.

Inflammation of the cornea may be produced by extension from the sclerotica or conjunctiva, and by the usual causes of inflammation elsewhere. Persons with a scrofulous constitution are peculiarly liable to it, and in them, it is very difficult of cure, the disease often assuming a chronic character, and relapses taking place on the slightest exposure to the exciting causes.

In the management of acute inflammation of the cornea, the importance of the organ affected, and the rapidity with which disorganization may take place, must be kept constantly in mind. The treatment must of course be regulated by the violence of the inflammation and the habit of the patient, but prompt and efficient measures should always be adopted. In the commencement, general blood-letting is almost always demanded, and for this purpose opening the temporal artery has been highly recommended by some writers. We are not aware of any advantages that it possesses over venesection, and a bandage around the head being usually necessary to arrest the flow of blood, the circulation of the head is impeded, and its vessels become engorged; and even if no bandage be required, the wound generally proves a very injurious source of irritation; venesection should therefore always be preferred where it can be accomplished. After general depletion has been carried as far as the violence of the disease may demand, or the constitution of the patient justify, topical depletion will generally be required. It is impossible to lay down any very accurate rules by which it may be known, at what period, and under what circumstances, topical is to be substituted for general depletion. In inflammation of organs not essential to life, occurring in healthy individuals, and where none of the vital organs are implicated, general depletion may be pushed to a greater extent than is usually supposed, and with much advantage; and the usual error we suspect is in not depleting sufficiently. But in diseases of vital organs, or where these have become deeply implicated, and where the inflammation has been of long continuance, and become established, and especially in broken down or depraved constitutions—topical

must be early substituted for general depletion, and often entirely depended on; as the latter, in these cases, debilitate the healthy organs more than it relieves the affected ones, and the restorative powers are thus weakened or destroyed. When a good deal of pain attends the disease, much relief is often afforded by fomentations, especially by means of flannel wrung out of a hot decoction of poppy-heads; but these applications should not be too long continued, and warm poultices should be invariably avoided as eminently injurious, promoting suppuration and disorganization of the cornea.

Purgatives and revulsives will be found highly useful; their employment must be regulated by the same rules as laid down in inflammation of the conjunctiva; a proper diet must also be enjoined.

The inflammation being reduced by the above measures, if opacity remains from the effusion of lymph, its absorption must be promoted by keeping down the inflammatory action by occasional local depletion, by low diet, by stimulating applications, such as the solutions of nitrate of silver and corrosive sublimate, red precipitate ointment,* &c. When other means fail, mercury urged to salivation in combination with the above means, will sometimes succeed; but we prefer the combination already noticed of calomel, nitre, and tartar emetic; and think we have derived most advantage from its alterative action, than when urged to salivation. In scrofulous persons, salivation is much to be deprecated; we have seen such kept under the long-continued influence of mercury for opacities of the cornea, to the great injury of their constitutions and the evident aggravation of the disease, relapses of inflammation occurring on every variation of temperature, from the increased susceptibilities thus created, and the vessels of the cornea becoming, from the frequent attacks of disease, permanently enlarged. In such cases the alterative effect attained by the use of the combination just noticed, will often be found useful, but should be administered with caution, and frequently intermitted for fear of salivation, and during these intervals the bowels should be kept free by the daily administration of rhubarb and prepared chalk.

When the varicose vessels belong to the conjunctiva, it has been recommended to take up a fold of this membrane, and excise a small portion so as to divide them, or when they are somewhat deeper to divide them with a knife, but our own experience would not lead us to say much in favour of this practice.

* The red precipitate ointment should be very carefully made, or it will be productive of more injury than benefit. The precipitate should be first reduced to an impalpable powder, and then intimately mixed with fresh lard or butter. It should not be used after it has become rancid.

By the judicious employment of the means indicated, very extensive opacities of the cornea may be removed; indeed, unless the lymph has become organized, great benefit, or even a cure is mostly effected, especially in young patients; and even where the lymph has become in a degree organized, and varicose vessels are seen running to the part, something is often gained. For when both corneæ are affected in their whole extent, and only a portion is rendered transparent, if this is not over the natural pupil, an artificial one may be made opposite to it, and a useful degree of vision restored.

2d. *Chronic Inflammation*.—This produces a slow change in the texture of the cornea, rendering it opaque, indurated, condensed, and more easily torn than in health. Such disorganization is not produced in the cornea, without the inflammation extending to the conjunctiva, and often to the sclerotica; lymph is deposited in both these tunics, especially the former, which loses its transparency, and the latter its blue colour. The globe of the eye appears as if covered with a fibrous fascia, the fibres of which converge towards the centre of the cornea, which part presents a yellow, pearly appearance, not unaptly compared to that of the inside of an oyster-shell, and varicose vessels ramify over it.

Such cases are generally beyond the resources of art, the effusion of lymph having usually been so profuse as to agglutinate the cells of the interlamellar tissue, and the absorbents are no longer capable of effecting its removal.

A deposit of lymph, formed perhaps by a slow, chronic inflammation, is often seen in old men; the lymph is deposited in a regular circle around the cornea, forming what has been denominated the arcus senilis. Mr. Wardrop* says that he has seen it at all periods of life, even in very young subjects.

3d. *Suppurative Inflammation*.—Inflammation of the cornea rarely, if ever, terminates by the effusion of true pus; but instead of this fluid, a tenacious, yellowish substance, partaking more of the nature and properties of lymph, is secreted in the cellular tissue connecting the laminæ of the cornea. This termination is like abscess in common cellular tissue. When the deposit is small, it is frequently removed by the absorbents, and often without any vestige being left. Sometimes coagulable lymph is effused round the deposit, or in its place, and a permanent cloudiness is left. When the deposit of pus is large, the superficial lamina are usually removed by absorption,

* Op. Cit. Vol. I.

the contents of the abscess are thrown off in the same manner as sloughs, and an ulcer is left. This may heal by the usual process, and the transparency of the cornea be restored, even when a considerable portion of it has been affected. Mr. VETCH* says that he has seen the cornea not only recover its transparency after two-thirds of its extent had been destroyed in this way, but that he has frequently procured a transparent cicatrization after the second, and even third attack of inflammation, followed by ulcer and slough.

The treatment must be commenced by reducing the inflammation, which is to be accomplished by the measures already noticed; principally topical depletion and purgatives, as the disease is usually not very violent, and blisters should early be resorted to; by these means the effusion will generally be absorbed. When the abscess is very superficial, and the external laminæ are bulged out, it is well to open it with a cataract needle, and evacuate its contents by entangling them with the point of the needle, and drawing them out. In abscess deeply seated, no advantage is obtained from this practice. When the effusion is very large, and there is a disposition to slough, as usually occurs in depraved constitutions, the system must be supported by tonics, such as the sulphuric acid, bark, &c. and a nourishing diet.

4th. *Ulcerative Inflammation.*—The cornea, like the other fibro-cartilages, very frequently ulcerates. The conjunctiva bears the same relation to the cornea, as we have already observed, that periosteum does to bone, and perichondrium to cartilage; and when the former is removed, either by abrasion, the rupture of pustules, or destroyed by chemical agents, a portion of the cornea being exposed, sometimes dies, and is removed by absorption, leaving an ulcer. Ulcers are also produced by mechanical injuries, but wounds of the cornea often heal without ulceration, the healing process being at once established. The shape and appearance of ulcers are very various, sometimes appearing like little excavations, with little or no surrounding opacity; most generally, however, lymph is effused around them, and at their base. Mr. Vetch† says that they have a disposition rather to spread than to deepen, while Mr. Wardrop‡ asserts that they are more apt to increase in depth than in breadth. The fact seems to us to be, that when the sides of the ulcer are not limited by coagulable lymph, they spread more readily than they penetrate, but when lymph is deposited on the sides, it seems to arrest their spreading, and they are dis-

* Op. Cit.

† Op. Cit.

‡ Op. Cit. Vol. I.

posed to deepen, until they arrive at the inner lamina of the cornea, which ulcerating less readily than the others, the progress of the ulcer is for a time arrested, but if the disposition to disease is not removed, this check is but temporary, and the ulceration may spread or deepen, or both, the internal membrane not affording any effectual barrier to the ulcerative process.

As soon as the internal lamina is sufficiently thin and weakened by the ulceration, which, if the ulcer is broad, early happens, it is pushed forwards by the pressure of the aqueous humour; or if the ulcer is small, this lamina may ulcerate through, and then the serous internal membrane is protruded, in the form of a transparent vesicle, which soon ruptures, and the aqueous humour is discharged. If the ulcer is within the limits of the iris, the latter floats forward, and coagulable lymph is secreted, uniting the iris with the edge of the ulcer and closing the opening. The aqueous humour being rapidly regenerated, however, before the breach is repaired or sufficiently strengthened to resist pressure, a rupture again takes place, and the humour is evacuated; and this is frequently repeated before a sufficient quantity of lymph is effused to render the breach strong enough to support the pressure of the aqueous humour. When the ulcer is near the centre, this rupture occurs more frequently, as the iris cannot assist in closing the breach. After the protruded membrane is sufficiently strengthened by the lymph to sustain the pressure, it is then pushed forward, and the iris with it, if the latter has become adherent to it. A complete hernia is thus formed, the pressure of which upon the sides of the ulcer causes their absorption, and the tumour thus gradually enlarges till it sometimes occupies the whole cornea. The tumour, at its commencement, if the iris is connected with it, is black; if not, it is transparent and colourless; as it advances it becomes opaque, whitish if the iris is not connected with it, while under opposite circumstances it has a beautiful bluish appearance; the cause of this colour, so different from that of either the cornea or iris, has never been explained.

When inflammation of the cornea occurs in persons of depraved constitutions, in those who have recently lost much blood, as for the cure of acute inflammation, or in children imperfectly nourished, the power of the arteries often appears to be extremely diminished, they do not perform their natural office of deposition with their wonted vigour, whilst the action of the absorbents continues as usual, or is even increased. In such cases, more being removed by the absorbents, than is deposited by the arteries, *interstitial ulcers from pure ulcerative absorption* occur, and the cornea remains transparent, but

indented or pitted, according as the ulcers are diffused or circumscribed. When the arteries are restored to their healthy action, lymph is deposited, which fills up the breach, and the ulcer is cured.

If the inflammation in such individuals be very intense, the arteries lose their powers entirely; the vitality of portions of the cornea are lost—the contiguous parts are removed by the absorbents—the dead portion is cast off as a slough, and lamina after lamina thus slough away. This occurs, besides under the circumstances noticed, in those in whom the parts have been weakened by previous repeated attacks of inflammation, and very frequently after the sloughing of the conjunctiva, which sometimes succeeds purulent inflammation of that membrane; and the cornea then presents that peculiar appearance designated by Mr. SAUNDERS, by the terms “cindery, ragged, flocculent.” When restoration occurs, it is effected, as in common ulcer, by the deposition of lymph, the excess of which is absorbed; and the transparency of the cornea is sometimes restored, even where a considerable portion of it has been destroyed. Mr. TRAVERS* says that if the inflammation be arrested even on the verge of gangrene, the cornea is susceptible of restoration by absorption. “This fact,” he adds, “I had lately an opportunity of establishing in the case of a lady who was rendered blind by acute suppurative inflammation of the conjunctiva; so inevitable to all appearance, was the destruction of the cornea, which had sloughed in a deep sulcus at its junction with the sclerotic above, that the most experienced practitioner of my acquaintance in this branch of surgery, pronounced the case hopeless and irremediable, and took his leave. The highest tonic regimen, bark, wine, and opium, followed close upon a very active and bold depletion, and the anterior chamber was fortunately and unexpectedly preserved. No sooner was a sign of the arrest of sloughing ulceration obtained than I commenced a mercurial course; in three days the system was affected; the recovery of the figure, and transparency of the cornea was rapid and complete beyond all expectation, and an equally perfect state of vision was restored and established.”

The gangrenous opacities of the cornea, says Mr. Travers,† produced by lime or other substances destroying its texture, are sometimes superficial and defined in extent, and a process resembling exfoliation ensues. More frequently this disorganization is integral and complete. The cornea, disorganized by acids, is rendered instantly opaque, shrivelled, and of a yellow colour, almost resembling a piece of wash leather.

* Op. Cit. p. 119.

† Op. Cit. p. 170.

Ulceration of the cornea being the effect* of inflammation, where this condition is still present, the first indication is of course to remove it, and this is to be accomplished by the means already pointed out in speaking of the inflammation of this part. Acute pain, lachrymation, and photophobia, often accompany ulcers of the cornea, and where these are not removed by the ordinary remedies, temporary benefit will be obtained from fomentations, but the greatest relief will be experienced from touching the ulcer with a fine pointed pencil of nitrate of silver, so as to produce an eschar. After the inflammation is subdued in ordinary cases, the disposition to ulceration ceases, granulations form, and the process of restoration takes place; should this flag, stimulants ought to be applied, and the best of these is the nitrate of silver. Where the inflammation has been very intense, and it is found difficult entirely to overcome it, the combination of nitre, calomel, and tartar emetic should be administered; or if this state be accompanied with much pain, the blue pill and opium may be given. When the ulcer penetrates deeply into the cornea, and the internal lamina, or its internal lining membrane are protruded by the pressure of the aqueous humour; this protrusion should be touched with the fine pencil of lunar caustic, by which means, together with active antiphlogistic measures, especially topical depletion and purgatives, and blisters to the back of the neck, the further extension of the ulceration, and the evacuation of the aqueous humour may be prevented. Should, however, these means fail, and the ulcer penetrate the cornea; if the opening is small, and opposed to the iris, the further escape of the aqueous humour will be prevented; and by the further employment of antiphlogistics, the progress of ulceration may be arrested, and restoration take place. The iris is however adherent to the cornea by the lymph effused during the healing process, and its actions deranged. This may be often relieved by promoting the absorption of the lymph, by putting the system under the mercurial influence and by applying belladonna to the lids and brow. When the aperture made by the ulceration is large, a portion of the pupil is usually prolapsed, and a true hernia of the iris takes place, generally attended with extreme pain from the stricture. This is to be relieved by the free application of the pencil of nitrate of silver so as to destroy the vitality of the part. When the slough separates, a fresh portion of the iris will be protruded, and this is to be treated in

* Scarpa states that ulcer of the cornea is the cause of the inflammation, and not the inflammation of the ulcer. We know not how so accurate an observer could have made such a mistake. See translation of his treatise on the Diseases of the Eye, by Briggs, 2d ed, London, 1818, p. 216.

the same way, and the operation repeated, till the pain ceases and restoration takes place. The iris in this case is permanently injured, and the pupil usually closed. If the prolapsed iris has been neglected in the first instance, it may increase in growth and assume a malignant action; it should then be removed by scissors, and the cut surface and margin of the ulcer, freely touched with the nitrate of silver. When the cornea becomes disorganized and prominent, no attempt at effecting restoration will be successful. If the prominence is not very considerable, and no irritation results from it, it had better be left undisturbed; but when it is so great as to prevent the closure of the eyelids, occasion great deformity, or be productive of habitual irritation of the edges of the eyelids, it should be excised, after which the humours will usually escape and the globe collapse. The excision may be most conveniently performed by passing a needle with a ligature across the cornea to steady the eye; the protrusion may then be divided with a large cornea knife, and if the whole is not divided, the remaining portion may be cut with a pair of scissors. A compress of soft linen should then be applied to the eye and retained by a roller.

In interstitial ulcers the indication is to excite the action of the arteries, which is to be fulfilled by the use of topical stimulants, as a solution of nit. argent., sulph. of copper, or vinum opii, and nutritive diet and tonics, as the sulphuric or nitric acid and bark. As soon as the restorative action commences, it will be perceived by a whiteness of the ulcer and slight cloudiness of the surrounding parts, denoting the adhesive process.

In the treatment of sloughing ulceration of the cornea, a discriminating judgment and close observation will constantly be required. In healthy constitutions the most prompt and vigorous antiphlogistic measures will be demanded in the commencement, and at the same time the ulcer should be touched with the pencil of nitrate of silver; it will subsequently be often necessary to allow nourishing diet and tonics. When the sloughing process is arrested by these means, mercury will in many cases complete the cure. In debilitated and depraved constitutions, nourishing diet and tonics will often be demanded from the very commencement; but at the same time, if there is much local inflammation, topical depletion should be employed, and afterwards the ulcer should be touched with the solid nitrate of silver, and when the healing process commences, the solution should be applied several times a day. When the ulcer penetrates the cornea, the local applications already recommended are to be employed, but instead of antiphlogistics, tonics and nourishing diet are to be prescribed.

5th. *Conical Cornea*.—We shall here notice an affection of the cornea, only noticed within a few years past, and which, as we have never met with it, we shall transcribe the account given of it by Mr. Travers.* “The cornea is occasionally subject to a process of thinning or absorption of its interlamellar texture, and in consequence loses its natural tonic resistance to the pressure of the contents of the globe. It usually assumes a conoidal figure, but this is not always the case; the projection of the corneas is sometimes uniform, describing the segment of a larger sphere. The apex of the cone corresponding to the centre of the cornea, when this figure is assumed, exhibits a degree of tenuity and brilliancy which gives it the appearance of a pellucid fluid, like a dew-drop suspended. The patient’s vision becomes so inconveniently short, as to render objects confused at a very moderate distance; the change is sometimes slow, occupying months and even years, and on the contrary I have seen it produced in its greatest extent in the short space of eight weeks; both eyes are generally affected, though not always in the same degree. The disease is not produced by inflammation or any obvious assignable cause; it is more frequent in women than in men, and in my experience affects the periods of youth and middle life; I have never seen it commencing in infancy or old age. It is as much the disease of the robust as of the weakly constitution and frame of body.”

A variety of remedies have been tried for the cure of this affection, such as frequent cupping, issues, evacuating the aqueous humour, all however without success. A pupillary aperture, set in a black ring frame, about a quarter of an inch or more in depth, when the convexity is not very much increased, by confining the rays of light to the central portion of the cornea, and preventing the confusion from the unnatural refraction of the lateral rays, will sometimes considerably assist vision.

6th. *Encysted tumours in the lamellæ of the Cornea*.—These were first observed by Dupuytren in the case of a child who had been struck on the eye some weeks before by a stone. At first view he conceived it to be an opacity of the cornea, but a more minute inspection showed it to be a serous encysted tumour existing between the lamellæ of that coat. He introduced a cataract needle into the small cyst, and moved the instrument up and down in order to irritate its inner surface. The fluid in the tumour was evacuated, but in fourteen days it formed again. The operation was repeated, and adhesion of its sides took place, but opacity of the cornea resulted. No other

* Op. Cit. p. 124.

surgeon has, we believe, noticed these tumours, and little is known respecting them.

7th. *Ossification of the Cornea*.—The vessels of the cornea, like those of the other fibro-cartilages, in some few instances secrete osseous matter. Mr. Wardrop* has met with it on one occasion; in this the form of the whole eye was changed, the cornea had become opaque, and on maceration a piece of bone, weighing two grains, oval shaped, hard, and with a smooth surface, was found between its lamellæ. It is mentioned in the *Nouvelle Bibliothèque Médicale* for May, 1817, that the eye of an old man had been recently presented to the Société Anatomique by M. MONOT, in which the cornea was ossified throughout.

III. *Inflammation of the Serous Lining Membrane of the Cornea.*

Inflammation of this tunic, independent of that of the cornea, is of too unfrequent occurrence to enable us to ascertain very minutely its progress and terminations, but as far as our observation goes, they are similar to those of other serous tissues. In the following case we were enabled to observe this affection with great advantage, as it was uncomplicated with inflammation of the cornea.

Eliza Williams, a coloured woman, aged twenty, applied to the Pennsylvania Eye Infirmary, April 6th, 1826. Her sight had been growing dim for several days, and she suffered slight pain in her eye. On the most minute examination, no change from a healthy state could be perceived, except perhaps an extremely faint dullness, almost imperceptible, situated at the posterior part of the cornea, the cornea itself being evidently unaffected. After some days a small spot became evident, and was shortly followed by two others, differing both in situation and appearance from the opacities produced from inflammation of the cornea. They were deep-seated, and evidently produced by the effusion of lymph on the inner surface of the cornea, giving it the appearance of being mottled with white. The margins of these spots were well defined, and the lamina of lymph so thin as not to produce perfect opacity.

The treatment employed in this, and which we would recommend in similar instances, was the employment of antiphlogistics to prevent effusion, and to put the system under the mercurial influence to promote absorption after this had taken place. In the case we have described, owing to peculiarity of constitution, this latter could not be persevered in to a sufficient extent, and the spots have remained permanent.

* Op. Cit. p. 72.

ART. VIII. *On the Use of Iodine in several Diseases.* By WILLIAM M. FAHNESTOCK, M. D.

THE unsettled state of public opinion on the efficacy of the iodine in many of the diseases for which it has been highly extolled, renders any confirmatory proof interesting to the physicians of the United States, who, in general, have been restrained in experimenting with the article from the contradictory statements of the practitioners of Europe; and though it is not in our power at present to offer a very extensive experience, we hope the sketches of a few cases, which we append, may tend to a further and more active prosecution of the subject. We shall hereafter communicate more particularly the results of a series of experiments with this substance; and, to aid a proper estimate, we may prepare a monograph of practical deductions drawn from the facts and observations of the faculty of both hemispheres.

Taught to regard it as nugatory and utterly useless in confirmed goitre, and cautioned by the admonitions of Dr. GAIRDNER, and the restrictions imposed on its exhibition by the Swiss government, we refrained from employing it, until the constant importunities of a suffering patient induced us to administer it in a case which had baffled every remedy in its forming state. The tumour was large, pendulous, and of a purple colour, of eight years standing, and produced considerable pressure upon the trachea. The tincture of MAGENDIE* was given in doses of ten drops, gradually increased to twenty, three times a day, and the unguentum potassæ hydriodatis rubbed on the part mornings and evenings. After a fortnight it began to decrease, and in the course of two months it had entirely disappeared.

CASE II.—Mary, ætat twenty-eight, a sister of the Antietam nunnery of Franklin county in this state, discovered the enlargement of the thyroid gland six years since, which continued to enlarge until it had obtained the size of a walnut, and was hard and painful. The mild tincture was prescribed in the ordinary doses, and the liquor potassæ hydriodatis ordered to be used externally. The tumour, at present, (having used the medicine seven weeks,) is scarcely perceptible, soft, and free of pain, or any uneasy sensation. We have now five other cases under an equally successful treatment.

* Believing the quantity of iodine used by Magendie too great, independent of the waste, we subsequently have prepared the tincture with thirty grains to an ounce of alcohol, and have much reason to be pleased with the modification.

CASE III.—Perplexed with a case obscure in its nature, and very concealed in its operations, which appeared to be a periodical congestion of the whole glandular system, associated with derangement of the catamenia, in a young lady of nineteen, and recollecting the encomiums of COINDET and COSTER* on the iodine as an emmenagogue, and its usefulness in scrofulous affections, I recurred to it with the most signal advantage. About the usual period of menstruating, the superficial glands became enlarged and painful, sometimes highly inflamed, and occasionally producing imperfect suppuration, accompanied by nausea, indigestion, and eructations, which evidenced a disordered state of the mesenteric system. The discharge from the uterus was but small, and attended by much pain, and frequently scarcely any show at all. The tincture was administered in the syrup of sarsaparilla, and was continued three months with the happiest effects, and seemingly with permanent benefit. There are no cases which come under the care of the physician, more complicated and interesting than the derangements of the uterine system, or for the relief of which, the young aspirant, gains more of the applause and confidence of the influential part of the community. It therefore affords the most fertile field for anxious but cautious and prudent experiment. I have also the pleasure of adding my testimony to that of M. GIMELE,† of its usefulness in chronic leucorrhœa, from a case now under treatment, but not sufficiently recovered to report as perfectly relieved.

CASE IV.—Another formidable disease, which has combated every remedy, and defied the surgeon's knife, may be found to yield to this very active agent—fungus hæmatodes. An incipient case came under our observation, in which the limb had not yet attained very great enlargement, but was knotted, and bore all the characteristics of the genuine fungus hæmatodes; it yielded most effectually to the tincture and unguentum.

We have never found any of the bad effects arise from its use as exhibited in the lamentable picture of the English author upon this substance. A little sickness of the stomach occurred in the first case, which is to be attributed to the strength of Magendie's tincture; and a little vertigo attended the second, probably from increasing the dose too rapidly, both of which were relieved by omitting the remedy for one day; but with the mild tincture we have never witnessed any unpleasant symptom; and it may be proper to add, that DECARRO, COINDET, ERLINGER, FORMEY, and a host of others who have experimented most extensively, never complained of any injurious quali-

* Archives Générales de Médecine.

† Revue Médicale.

ties. It is well, however, to observe that the *burnt sponge*, which has been used as the same, has not precisely the same operation, and contains some deleterious properties, which have been particularly remarked by HUFELAND,* as being noxious to persons disposed to phthisis and spitting of blood; and it is doubted by FODERE and M. HERCH whether it contains any iodine whatever. Much may depend on the quality of the tinctures, as it has been ascertained that when suffered to stand any time, it deposits crystals, and may form the ioduretted hydriodic acid: therefore it should always be prepared for immediate use, and in small quantities. These precautions may obviate the evils complained of so bitterly—to which may be added, premising its exhibition by evacuating the alimentary canal, and occasionally giving a gentle cathartic, as calcined magnesia, should any untoward symptoms occur.

ART. IX. *Case of Tracheotomy.* By ZADOK HOWE, M. D. of Billerica, Massachusetts.

A DAUGHTER of Mr. French, of Tewksbury, three years and a half old, on the 21st of September last, while at play in the garden, took a bean into the trachea.

I saw the child two hours after, but as we had no means of ascertaining the nature of the foreign substance, and as the symptoms were not very urgent at that time, I heard nothing more of the case till the 28th. The child was then labouring under frequent and distressing paroxysms of coughing attended with suspended respiration and other urgent symptoms which clearly indicated the necessity of an operation. It was proposed and immediately assented to by the parents. It was evening, and as I was unprepared for an operation, it was postponed till the next day, when, with the assistance of Dr. DALTON, of Chelmsford, it was performed in the following manner.

A heavy table was provided with the side leaves turned down, leaving a horizontal surface, sixteen inches wide, covered with blankets, with a firm roll of cloth four inches in diameter across the end.

The child was firmly secured on the back by the hands of assistants, the nape of the neck resting on the roll of cloth, the head carried far back over the end of the table. An incision was made from the lower edge of the thyroid cartilage to within a quarter of an inch

* Hufeland and Osann's Journal, der pract. Heilkunde, Feb. 1828.

of the sternum. After waiting a few moments for a slight bleeding to subside, a puncture was made into the trachea with a slender double-edged scalpel in the centre of the incision, dividing one cartilage; then with a curved, probe-pointed bistoury the puncture was dilated from within outwards, dividing one cartilage above and one below. In this elongated state of the parts, the division of three cartilages made an opening sufficiently free to admit the forefinger of the left hand into the trachea. The finger was introduced to separate the edges of the incision which did not incline to retract. Immediately after withdrawing the finger, with a spasmodic effort, a bean was expelled with considerable force, and lodged on a bed which stood in the room. This saved us the trouble of attempting that part of the operation which I most dreaded; for experience had taught me to envy no man the pleasure of probing in the trachea for beans or peas. Half an hour after, the opening still retained the shape of the finger, large and free; the divided cartilages had approximated but very little. The wound was then brought together, and secured with adhesive plaster, and being unwilling to disturb the stomach, we gave no medicine, excepting a few drops of laudanum, at the same time directing a spare diet. The plasters succeeded imperfectly, partly in consequence of the action of the mastoid muscles, and because the opening was rather too low on the neck to admit of their being applied to the best advantage. The air rushed through the aperture occasionally for forty-eight hours, but never after.

I dressed the wound a few times, and discontinued my attendance in about two weeks. At the time of the accident the child had not entirely recovered from the whooping-cough, but the cough troubled it very little after the operation. The wound was cicatrized at the end of eighteen days. A short time previous to this, a slight dysenteric affection took place, for which the family gave some domestic medicines. A few worms were discharged, and the child soon recovered, the cough wholly subsiding at about the same time.

The result of this case may, I think, be attributed in part to the position of the child when the opening was made. By carrying the head very far back over the cylinder of cloth, the trachea became considerably curved.

In the act of coughing, the bean was suddenly carried from one end of the trachea to the other, and when forcibly propelled, would probably incline to the longest side of the curved tube; the opening being in that part, and as large as the cavity of the trachea, we had some reason to expect what actually took place, the expulsion of the bean. By introducing the finger, and turning it a quarter round. the

elasticity of the cartilages seemed to be destroyed, or at least suspended for a length of time sufficient for our purpose. In an older subject the elasticity might not have been so easily overcome in this manner. The operation never seemed much to affect the general health of the child, and the most difficult part of the after-treatment was to restrain the immoderate indulgence of the appetite for food.

Billerica, Nov. 6th, 1828.

ART. X. *Case of Hernia Cerebri successfully treated by the Sponge Compress.* By J. W. HEUSTIS, M. D. of Alabama.

ON the 26th of March, 1828, I was called upon to visit a negro boy, about eight years of age, who had received an injury on the head. The day had been extremely windy, and many of the old, dead trees in the plantations were blown down. The subject of this article being at work in planting corn, was struck upon the head by the falling of a limb of a tree, and knocked senseless to the earth. I found him in a state almost insensible, with frequent vomiting; pulse small, and the right eye closed. The wound was situated on the inferior and anterior angle of the left parietal bone. Upon extending the opening with a scalpel, and turning up the flaps, there appeared a depression of bone of about the size of half a dollar, pressed down upon the brain, to the depth of about a quarter of an inch, and much splintered and shattered at the circumference. I sawed across the base of the depressed portion with Hey's convex saw, and then succeeded in elevating and removing it without having recourse to the trephine. Several small pieces of bone were driven into the substance of the brain, and were removed with the forceps. After the operation he was able to speak, which he could not do previously. I saw him the third day after the operation; there was then no untoward symptoms; I did not remove the dressings, and as there was some fever, I directed his bowels to be kept open with salts. Five days after the operation I dressed the wound, which showed a disposition to become fungous; I made use of the common dressings. At the next visit I found that the fungus had protruded through the opening in the skull to about the level of the integuments; I therefore removed it with the knife. From this time the growth of the fungus was rapid, so that I was under the necessity of removing it every two or three days. I at length came to the conclusion of letting it remain and

take its own course, agreeably to the advice of Mr. ABERNETHY. I soon, however, had reason to alter my plan, for the fungus continued to increase, and its vessels anastomosing with those of the integuments, made its growth still more rapid, producing at the same time an absorption of the scalp upon which it pressed, and a corresponding deficiency of the integuments. I now resolved to have recourse to pressure. For this purpose, having sliced away the protruding fungus to a level with the inner surface of the cranium, I applied to the wound the common dressings, lint spread with basilicon, and over this a piece of dry pressed sponge. All this was confined with a bandage passed moderately tight around the head, and under the chin, and secured by a cap.

As the patient lived several miles distant, I directed the nurse to dress the wound in the same manner, till I returned. At my next visit, two days afterwards, I found that the fungus had not increased, though from the neglect of the nurse in suffering the bandage to become slack, but little diminution had taken place. I now increased the pressure as much as the patient could comfortably bear, and directed the attendants to continue it as long as the fungus should show a disposition to rise. Four days afterwards I visited him again, and now found that the fungus had entirely disappeared, and its place occupied by a hole in the substance of the brain as large as a hen's egg. The surface appeared healthy, being of a whitish, flesh colour, and covered with a glairy exudation; the arterial pulsation had also considerably abated. I ordered all washes to be discontinued, and a simple plaster of basilicon to be applied over the hole in the cranium, guarded with the bandage and cap. I saw him no more for a week, or ten days; the whole was then filled up with a healthy deposition, and the wound in a fine, healthy, and healing state. I have since learnt that this patient has perfectly recovered.

Since writing the above, I have seen in this Journal, for August, 1828, p. 492, a notice of a case of *fungous cerebri*, successfully treated by Professor DUDLEY on the same plan. This method of treatment by Professor Dudley, had been previously mentioned to me by my young friend, Dr. BENJAMIN R. HOGAN of Selma, and I must do Dr. Dudley the justice to say that it was upon this information that I had recourse to pressure in the case above-mentioned; I had previously deliberated with myself on the propriety of this practice, but was deterred by the unfavourable accounts respecting it, recorded by surgical writers. These successful instances however, are sufficient to authorize a further trial, and may serve to remove any existing prejudices in relation to this mode of treatment.

Other means I had tried without success; the use of the knife gave no check to the morbid action, and was entirely unavailing, and caustic and strong styptic applications are in such cases inadmissible. Pressure indeed seems to be the only remedy that we can safely rely on with any prospect of success. Some caution may be necessary in its employment not to make it so great as to create pain or uneasiness, nor to continue it too long. The length of time, however, that it may be necessary, will be determined by the effect. When the disposition of the fungus to protrude has ceased, and the granulations sink below its proper level, pressure is no longer necessary. The unsightly cavity left in the brain after the removal of the fungus by pressure, might excite the apprehensions of the inexperienced practitioner; but this is a circumstance of no moment; no unfavourable symptoms are occasioned by it; nature is fully competent to the work of regeneration, and in the brain this process appears to progress with more rapidity than in any other part of the body.

Cahaba, Al. November, 1828.

ART. XI. *Reports of Cases, with Observations.* By THOMAS HENDERSON, M. D. Professor of the Theory and Practice of Medicine in the Columbian College, D. C.

ASTHMA.—It may not be altogether unprofitable to call the attention of the readers of this journal to asthma. Where opinions and practice are so discrepant, all cannot be right; some theories are more consistent with sound pathology than others; consequently that practice which is based on the most rational speculations will be most successful. There is, at least, a very great preference in the principles and practice of authors in this disease.

Too little attention has been paid to the work of Dr. BREE on asthma. I have seen no review of it in the medical journals of this country. The observations and cases which follow, may lead to a more general estimation of the work.

If asthma does not occur as frequently as many other diseases, it is not the less worthy of attention. One case of an obstinate, unmanageable disorder is more interesting than a hundred of those ordinarily arising, and easily treated. That asthma has, as to radical cure, baffled the profession, I know full well. It is one thing to carry a patient through a paroxysm: *nature can* do this. It is another to

prevent the recurrence of the paroxysm, or in other words, cure the disease: *art must* do this.

The termination of a paroxysm of asthma proves nothing more than the complete existence of the disease.

CULLEN had very slight estimation of the powers of art, when he observes "it is seldom that an asthma has been entirely cured, I cannot propose any method which experience has proved generally successful." A suggestion of Cullen deserves attentive consideration, viz.: the distinction between ordinary, or even aggravated degrees of dyspnœa, and the regular well-marked asthma. This last he most beautifully describes. The disease is as determinate as an intermitting fever, though not so regular in paroxysmal accession. It cannot be, or it ought not to be mistaken for any other disease.

BROWN supposes asthma to require a treatment similar to that in gout.

Many very useful suggestions may be found interwoven with DARWIN's speculations on the subject of asthma. While the glimmerings of truth reached his mind, and his genius on this, as on every other subject, was manifest, yet either he was not well settled as to his practice, or he has given it to us in a form not likely to prove experimentally useful. In humeral asthma, for example, which he ascribes to affusion of fluid, and debility of the pulmonary absorbents, he advises ether and laudanum. He left the disease as he found it, intractable.

HEBERDEN seems to have a better idea of the *lædentia* than of the *juvantia* in this disease. Those in this country, who have adopted the "practice in vogue," might profitably have referred to the cautions of the venerable and faithful Heberden. He seems not positively to have improved the practice in asthma.

Several other systematic writers have written learnedly and copiously on asthma; nevertheless, the disease has baffled the investigation of medical men from the time of WILLIS, whose views were as perfect as those of any author since. Not even the great, luminous, discriminating mind of CULLEN was able to throw out such pathological or practical light, as would lead to a ready or frequent cure of asthma. Its dreadfully distressing symptoms, obstinacy, and almost certainly fatal termination from direct violence, or in bringing on other diseases, render it a very interesting subject of inquiry.

It has happened that two medical men have suffered with asthma. I allude to Sir JOHN FLOYER and Dr. BREE. These gentlemen, impelled by personal affliction, and aided by great abilities, sought for a remedy. Sir John Floyer failed; he suffered for thirty years. Dr.

Bree succeeded completely in curing himself and others. His principles applied to practice have, in my hands, been eminently serviceable; and the opinion expressed with modesty, that he has stripped asthma of much of its character as an opprobrium, will excuse my attempting to draw the attention of the profession to his elegant and valuable work.

It was the opinion of Cullen, nosologically expressed, that asthma originated and existed "*sine causa evidente*:" in other words, that the chief obstacle in the way of successful treatment was an ignorance of the cause. Bree differs here with Cullen, for he lays down as the most frequent cause of asthma, a very evident one, viz. the effusion of serum and mucus. Another palpable difference between them is, that Cullen depended chiefly on means to palliate the paroxysm, while Bree, duly regarding that, relies mainly for a cure on preventing the return of the paroxysm.

Bree's definition of asthma is "that it consists in excessive action of the muscles of respiration, *without acute fever*, occasioned by irritation of the parts or organs which these muscles are intended to serve." The prominent symptom in asthma is the difficult respiration. Convulsive or inordinate action of the muscular fibre is always the result of irritation; this action is intended as an exertion to free the system from, or to point out an offending cause. Respiration is a process carried on by the agency of a certain set of muscles; when the usual proportion of air is inhaled, the process is natural and easy. When, from some morbid, offending, irritating cause, be that what it may, the lungs are impeded, the action of the respiratory muscles becomes disordered, and dyspnœa takes place. We reason then, *a priori*, that there is in asthma an offending cause, which excites the muscles of respiration. What that cause is, remains to be ascertained by diligent and minute enquiry into the state of the several organs, which these respiratory muscles are related to.

Dr. Bree divides asthma into four species:—

1st. Convulsive asthma, from effused serum or mucus as the irritating cause.

2d. Asthma from subtle irritating particles and properties in the air.

3d. Asthma from irritating causes in the abdominal viscera: the respiratory muscles, it will be remembered, subserve the operations of these viscera.

4th. Asthma from habit.

I shall consider the first species in this communication. The diagnostic is "a difficulty of breathing, a sense of straitness in the chest,

a wheezing noise, a cough, at first dry, and afterwards attended with copious expectoration."

Bree opposes the opinion of Cullen as to the "*sine causa evidente.*" By a series of facts and authorities, he proves the existence of effused mucus as a cause of this species of asthma. Cullen says it is a *diagnostic*, but Floyer and he overlooked it as a *cause*. Floyer suffered with this species for many years. The state of the pulmonary mucous capillaries is favourable to the effusion of mucus. They are relaxed, and it is poured out. This relaxed state is inferred from the persons most liable to asthma; they are weakly, delicate constitutions, and old persons. All the well-marked cases of asthma I have met with, have been in persons of feeble vascular energy, particularly arterial. Where the effusion is slight, there will not be severe dyspnoea, nor expectoration, for the absorbents take it up. Where the absorbents cannot remove the mucus, the accumulation is continued, the *difficultas spirandi* of Cullen appears, and a paroxysm of spasmodic asthma is formed.

After this brief and imperfect sketch of the first species of Bree, I proceed to relate a case which I think merits record.

CASE.—Mr. —, æt. 36, was seized ten years ago, in the month of August, with a paroxysm of convulsive asthma. He has, every succeeding year, been subject to more frequent attacks, until three years ago; since when he has, during the summer and fall, been visited by a severe paroxysm once in four weeks, sometimes more frequently. He very seldom has an attack during the winter season.

The fits are well marked. For two days previous to one, he is heavy and sleepy, is nervous and low-spirited, sleeps very sound at night, and is seized about one, A. M. with dyspnoea, wheezing, stricture across the chest, urgent desire for a free circulation of fresh air, copious sweats about the head and chest: these symptoms gradually increase, the lips become livid, the dyspnoea and distress augment to an apprehension of suffocation. There is great effusion of mucus, which produces cough towards morning, with copious, white, frothy expectoration. He has occasionally spit up a *dark* frothy fluid, and once or twice, when violent cough attended, a little blood was thrown off.

The expectoration of the mucus gradually relieves the violence of the paroxysm, and he is better until the succeeding night, when the same routine is gone through: at last, after three nights, he is left weak and without appetite, with excessive soreness all around the chest, from the exercise of the muscles to keep up respiration, and gradually recovers.

The bowels are usually regular during the intermission, until a short time before the paroxysm, when he is slightly costive. During the fit, he has head-ache and disorder of the stomach, the pulse is weak and frequent, skin cool.

His father has the same form of asthma.

This gentleman called to see me on account of his child. As he came up my stairs, I heard his breathing, and on enquiry received the above account. My venerable and learned preceptor, Dr. SPENCE, was then on a visit to me, and we encouraged Mr. M. to enter on a course of treatment. He was to inform me of his next attack.

July 26th.—Had the first paroxysm of the series last night; has been sleepy for several days; to day he wheezes and shows great bronchial effusion; pulse soft, weak, and intermitting. R. Pulv. ipecac. ℥i.—antim. tartar. gr. i.—M. To be taken to night on the accession of the paroxysm; early to morrow morning drink very strong coffee.

27th.—Took the emetic at 1 A. M.; threw off a great quantity of white frothy mucus, and nothing else. The emetic relieved him entirely from wheezing and dyspnœa, and he slept comfortably till day-break. Then the symptoms returning in some degree, he is heaving the chest and shoulders very much in breathing; wheezes and coughs up much phlegm; skin very cool and moist; pulse weak and soft; *he always passes a double quantity of pale urine during the attack.* R. Pulv. rad. colomb. ℥ss.—pulv. rad. zingib. ℥ss.—aq. ferment. ℥ss.—M. Digest for an hour, then take two table-spoonsful every two hours till 9 P. M.; take very strong coffee during the day with light digestible diet.

28th.—Continued much oppressed till he took the second dose of bitter infusion, when great relief was afforded; the urine became higher coloured, and diminished in quantity; dyspnœa so much better as to enable him to set upright with ease; and what uniformly indicates the subsidence of the paroxysm, he feels great soreness around the thorax, which he says is in the muscles, and is caused by their laborious duty in keeping up respiration during the asthmatic period; bowels regular; pulse soft and intermitting; lips not livid this morning; is relieved. Ordered the bitter infusion as yesterday, and R. Rubigo ferri. ℥iss.—pulv. rhei. ℥i.—pulv. zingib. ℥iss.—mel despum. q. s. ft. electuar. Begin to-morrow and take a tea-spoonful three times a day. R. Elix. vitriol, ℥i. Take fifteen drops in cold water after each dose of the electuary.

August 2d.—Has been taking the medicines; the electuary makes his stools black and thin; feels chilly in the evening; is excessively

sore all over, as if he had been severely beaten; pulse frequent and weak; has cough with tough expectoration every morning, and this is the case for several days after a paroxysm; the appetite weak. Omit the electuary for three days. R. Tinct. scill. \bar{z} ss.—acid. nit., ext. hyoscam. $\bar{a}\bar{a}$ \bar{z} i.—aq. pur. \bar{z} vij.—M. Take a table-spoonful three times a day till the mucus is expectorated, and till the urine is natural. Then resume the steel. Continue daily the use of strong coffee, and use ginger freely in every way. Light, plain, nutritious diet, and moderate exercise, avoiding exposure.

October 17th.—No symptoms of asthma since last report, although he has had a severe cold which has invariably heretofore produced it. The rhubarb purged him, and on leaving it out he became costive; one scruple was added to the electuary. The expectorant mixture relieved him very much; the vitriolic acid agrees with him; chest strong; respiration free; appetite good; health and spirits better than for five years past. *During the violent cold he lately had, the urine became pale as in the asthmatic paroxysms.*

1821, *November.*—No return of asthma; no oppression from bronchial effusion.

1823, *January.*—Entirely free from asthma; enjoys fine health and spirits.

1826.—Continues well; has gone through great fatigue and exposure in travelling for two years, without any disease.

Remarks.—The disease was of ten years standing when I was called in. His father had been similarly affected; the paroxysms were frequent, distinct, violent; he utterly despaired of recovery, and had resigned himself to an indefinite protraction of most dreadful suffering. The usual round of antispasmodics, ether, assafoetida, opium, &c. had been given; he had been attended by several physicians. He was a worthy, intelligent, resolute man, almost despairing of ever being able to subserve the interests of a large family. I explained to him my views, stated former success in treating a case, and he assured me he would persevere for any period in the use of remedies.

I have completely succeeded in removing asthma in two other cases. One a delicate female with leucorrhœa; weak pulse; and every sign of debilitated habit. The paroxysms were frequent; perfectly well-marked; could be mistaken for no other disease; attack at night, repeated the ensuing night; disappearing with copious effusion of mucus. The other case was a minister, of very studious habits, delicate constitution, weak arterial action. He was relieved, and has good health. The practice pursued was as in the detailed case above, with slight modifications.

I may at a future period give further reports on other forms of asthma.

Rupture of a Large Tendon.—Negro Robert was walking with a large piece of wood on his shoulder; in going down a slight descent, he fell on one knee, with considerable force; on throwing the wood from his arm, he attempted to rise but found he could not walk. He was taken to a house where I saw him one hour after the accident.

He complained of no pain any where, but at the spot where the tendon of the extensors of the leg unites with the patella. The flexors bent the leg, which he could not prevent; when the limb was flexed he could not straighten it. On examining the upper edge of the patella, my hand sunk into a deep hollow, so that I could run my fingers under the end of the ruptured tendon of the large muscles of the thigh, and raise up the tendinous extremity. The nature of the injury was now obvious.

The treatment pursued was the same as that recommended for fractured patella. The limb was extended and kept so with a splint from the hip to the foot.

I removed the splint after it had been worn for five weeks, and found that the limb could not be flexed. The dressings were removed; an oily friction daily was substituted; attempts were made to bend it gently every day, and under this plan he entirely recovered the free use of the knee-joint.

At the time of the accident no injury could be discovered in the joint; it could be freely moved without pain.

Case of Cough from elongated Uvula successfully treated by Excision of a portion of the Uvula.—In the year 1814, the following case came into my hands.

Mr. —, aged forty, served a tour of militia duty at Norfolk, as an officer. He contracted a gonorrhæa; the disease was apparently cured, but he thought it was never perfectly removed. I speak of his own impressions.

Six months before applying to me he was taken with sore throat, ulcerated, excavated, ragged looking tonsils. The disease extended to the uvula, inducing inflammation and elongation.

He had no fever nor pain. The stomach and bowels were irregular in their functions: the tongue was slightly furred; the pulse increased in frequency.

But the symptom which occasioned alarm was excessive and con-

stant coughing. The irritation induced by the cough, occasioned great emaciation, to such a degree that his friends all supposed him in consumption, and his case incurable.

The ulceration of the throat was improving, but the uvula was so long, and the end almost cartilaginous, that it was evidently the cause of the cough. I advised and performed the excision of the part. I can never forget the confidence with which the patient immediately exclaimed "I am well," nor how suddenly the cough left him.

I gave him a slight course of blue pill which removed all the symptoms by restoring the functions of the stomach and liver, on the irregularity of which I supposed the state of the throat to depend.

I should have long since published this case, but when the phthisis occasioned by elongated uvula was noticed some years ago in the *Philadelphia Journal*, I sent notes of it to a distinguished member of the profession, to be used as he might think best.

I have since cut off an elongated uvula which I was sure produced cough and irritation. The gentleman left town immediately after the operation, and I heard nothing of him afterwards.*

Tracheitis.—Richard Long, ætat five years. His mother had been subject to croup. The child has florid complexion. To-day,

* We make the following extract from Wiseman's Surgery, published in 1676. "There also happeneth an Elongation of the *Vvula* through the abundance of salivous Humour flowing upon it: in which case, if it touch upon the root of the Tongue or upon the *Epiglottis*, it causeth a frequent hauking, and in progress maketh a vexatious Catarrh.

"Such was the case of a Servant-maid to a Noble Lady in the Country. Various Medicaments had been prescribed ineffectually: I being in that Family was desired to see her. Looking into her mouth, I saw the *Vvula* hang'dangling upon the root of the tongue. It was not swelled nor inflamed. I supposing it the cause of her Distemper, took hold of the low part of it with my *Forceps*, and at the same time cut it shorter with a pair of Scissors. It did not bleed a Spoonfull: and afterwards it cicatrized of it self, without application of any kind of Medicament, and she was thereby freed of the Defluxion. Such another I cut off in a Servant of his *Majesty* belonging to *Hampton-Court*, and some others who were so afflicted, and thereby freed them of their catarrh, when all other Remedies failed." p. 333.

We take this opportunity of distinctly observing, that Professor Physick has never claimed the merit of being the *first* to discover that obstinate coughs were produced by elongation of the uvula, and to propose its truncation for their cure. The credit is, however, unquestionably due to him, of attracting the attention of the profession to the subject, and of devising the best instrument for the operation that has as yet been proposed for that purpose.

I. H.

March 28, 1827, hoarseness and febricula, skin warm, the cough ringing and dry. Parents administered a mixture of antimonial wine and paregoric, which produced perspiration; and except a dry cough, the child passed a comfortable night.

29th.—This morning took magnesia, which operated several times during the day. The child appearing as well as usual, except the cough; for this, oxymel of squills has been given during the day. 7 P. M. Fever came on; skin hot; cheeks highly flushed; restlessness; cough hard, ringing, and constant; a hissing noise in respiration; great dyspnœa on attempting to rise. The parents administered ζ ij. vin. antimon. which vomited the child freely, two or three times; mucus ejected; pediluvium satisfactorily practised. No relief being afforded, I was called at 11 P. M. when the child laboured under exquisitely formed tracheitis. The patient, though asleep, breathed as through a very contracted tube, with a hissing noise, and occasionally rattling a small quantity of loose mucus.

There was evidently straightened, frequent, and difficult respiration. The pulse frequent, full, hard; skin hot and dry; cheeks crimson flush. On waking, the cough proved entirely characteristic of croup, and the least exertion occasioned great increase of dyspnœa, and the whizzing sound in breathing, with corresponding increase of frequency of the pulse. Hoarseness of voice, restlessness, and tossing while awake; in short, a case of high febrile inflammatory action, with all the local phenomena of fixed croup. Under these circumstances a vein was opened, and blood drawn amounting to $\bar{\zeta}$ vi. till the pulse became weak and frequent; restlessness and paleness indicated the approach of syncope. The blood flowed in a rapid, full stream, and manifested a redness which I have often seen accompanying cases of such decided inflammatory action. Ordered R. Antim. tart. grs. iii.—merc. dulc. \mathfrak{D} j.—pulv. ipecac. grs. vi. M. et divid. in pulv. No. VI. One powder every fifteen minutes, in syrup, till full vomiting. The first powder produced slight, and the second free vomiting; they were discontinued. The matter ejected was a thick, tenacious mucus, with shreds or flakes of a white matter, entirely distinct from the mucus, and more resembling lymph. Vomiting continued with short intervals for three hours. When the respiration was free, the cough evidently less ringing and hard, and the immediate danger from croupy suffocation subsided.

30th.—2 A. M. But now came a remarkable change in the whole aspect of the case. The voice was clear; respiration free; vomiting of watery fluids, such as the drinks taken in. Two copious stools, bilious, feculent, offensive discharges, with mucus. The pulse fre-

quent, feeble, thready; the face pale, countenance sunk; eyes hollow; jaundice, with great thirst; the stools now assume a watery aspect, like the fluids swallowed, and there was every appearance of complete subduction of local and general inflammation. There was marked evidence of loss of the stomach's tone and of the heart's power, while the mind was distinct. After each vomiting and stool, there is now manifest collapse and alarming flagging of the vital power. Skin cool and partially moist.

Here was a great change and a critical case, and totally different from the just previous croup. I ascribe the rapid sinking of the heart's action, and of the general power, entirely to the deleterious effect of the tartar emetic. Let the reader remark on the state of inflammatory excitement just preceding the treatment, and the utter prostration occurring in two hours from the loss of $\frac{3}{4}$ vi. of blood, and taking *one* grain of tartar emetic, *six* of calomel, and *two* of ipecacuanha; a prostration attended with ghastliness, cold wrists, threatening speedy dissolution. The evacuations from the bowels were mere watery exhalations, from the relaxed intestinal capillaries, nothing like secretion of bile, or fæces, or mucus appeared. The indication now was to bring up the system, as promptly and decisively as two hours before it was to reduce it. I therefore directed *two tea-spoonsful* of pure warm claret wine, with *two* drops of laudanum, and gave with my own hand warm claret and water, until the pulse became fuller and the patient manifested revival. The astringency of the wine, and the power of the opium, restrained the watery stools, while the grateful cordial so restored the action of the heart, as to convince me it was within the power of judiciously exhibited stimulus. The patient perspired, coughed more easily, and fell into a quiet sleep.

6 A. M. Left him improving. I directed barley-water, with lemonade, and to rub his throat externally with mustard and spirit. Noon. Has vomited slightly; breathes easily; cough harassing, but looser; no stool; complains of pain in the right side; pulse frequent, soft; skin natural and moist; tongue clean, moist; says he is better. Has drank barley-water and taken sugar-candy with a little mint water. Ordered syrup. scill. comp. gutt. xv. secunda hora sumend. 4 P. M. Slept well; coughed less; pulse frequent, soft; otherwise as above, but without stool. Evening. Slept soundly, and perspired freely, so as to render warm bathing unnecessary; coughed less. Continued syrup, scill. comp. Midnight. Cough less; but always wakes with a remarkable hallucination, requiring some time to bring about rationale; rubs his nose, eyes, and eyelids very much; no evacuation. Directed an injection in the morning if costiveness continued.

31st.—9 A. M. Rested well last night; cough diminishing; waked without wildness; no evacuation; tongue very white; pulse frequent, soft; pupils dilated; complains of objects in the room being at great distance; face flushed; symptoms of irritation. Ordered senn. infus. with crem. tartar. 6 P. M. Pulse through the day 125, with an abrupt jerk, but not hard; awoke to day frightened, screaming, and confused; tongue still very white; skin cool, but limbs in motion and restless; still rubs his nose and eyes; cough frequent, but loose; senna operated once freely; continue it in increased doses, and pediluvium at night.

April 1st.—6 P. M. Slept well last night; bowels freely evacuated; tongue much cleaner and moist; pulse slower and soft; skin cool and moist; cough less; pupils natural. Has taken spir. nit. dulc. $\bar{3}$ ss. tertia hora, with fine effect.

2d.—2 P. M. Passed a restless night with dry coughing; complains of bright vision; heaviness in the head; had at 9 o'clock this morning a chill followed by high fever; frequent, strong, hard pulse; pain in the right side; tongue not white but yellow; bowels costive; no stool since yesterday. Ordered venesection to $\bar{3}$ v.—merc. dulc. grs. v.—mucilage of gum Arabic—flaxseed tea, with minute doses of antim. wine for common drink. 9 P. M. Has had one large stool, which, with the bleeding, much allayed the fever; pulse frequent, but not so hard, or strong, or full; skin cool and moist, and tongue cleaner, but cough incessant and harassing. Ordered a dose of liquorice, antim. wine, and paregoric in mucilage every hour; blister to throat if not less cough in two hours; injection at day-break, unless a stool previous.

3d.—9 A. M. Took three doses of the anodyne mixture; it composed him, so that the blister was not necessary; cough much less; very little febrile, but much irritative action; no stool; skin moist; tongue cleaner; some unpleasant feelings about the head and eyes. Ordered five grains of calomel with $\bar{3}$ ss. ol. ricin., and after its operation the anodyne mixture. 6 P. M. Purgative operated three times; is much better in every respect; take the anodyne.

4th.—6 P. M. Has passed a tolerably quiet night; cough less harassing, and loose; pulse still frequent; and little fatigue inducing dyspnœa; bowels loose; skin sweating; is very cheerful, and countenance bright.

The above case is remarkable, 1st, for the croup; 2d, for the immediate transition to collapse from the poisonous effect of tartar emetic; 3d, for the immediate relief given by the claret wine, the vegetable astringent and cordial, and the laudanum; 4th, for the singu-

lar state of vision; he said the objects in the room were at very great distance; and again he complained of the bright vivid colour of things about him; 5th, for the resumption of inflammation in the lungs and pleura after the collapse. On the whole the case may be useful to the young practitioner.

I was aided in the treatment of the latter periods of the case by my intelligent and valued friend, Dr. LOVELL, the surgeon-general of the army.

Perhaps the antimonial wine taken at first may have predisposed the child to the severe effects of the grain of tartar emetic I gave.

I once saw a child eighteen months old, die from a smaller dose of tartar emetic than I administered in the case of the son of Col. Long.

Washington, D. C. Dec. 1827.

ART. XII. *On the Impropriety of Ergot in Placental Cases.* By SAMUEL JACKSON, M. D. of Northumberland.

IN Vol. II. of this Journal, p. 89, we ventured to question the propriety of using ergot for the purpose of exciting the placenta-expelling pains, upon the principle that it is impossible at any time to ascertain certainly, whether the contraction of the uterus is regular, and of course, whether the medicine is to do good or evil; to propel the placenta or to compress and grind, and retain it with redoubled power. After more experience and much reflection, we are still of the same mind; and now beg leave to express our opinions more explicitly than before, being the more willing to obtrude this subject once more on the reader, as we have been informed that our former publication was not fairly understood. It has been supposed that we denounced the use of ergot in the irregular contractions merely, in which no practitioner would ever use this medicine; whereas a more careful perusal would have informed the obtusest reader that we object to it in all cases whatever of retained placenta, because it is impossible to ascertain in any case, whether the state of the parts within is suitable to its operation. As we are here at variance with all authorities, many of which ought to be respected far beyond our own, we must implore the reader's patience, while we remind him that "the race is not always to the swift, nor the battle to the strong, but that time and chance happeneth to all men."

There are five states of the uterus and placenta, any one of which

may exist without any possibility of ascertaining the fact; and if it do exist, the ergot must prove a very serious, and often a deplorable injury. *First*, the hour-glass uterus; *Second*, the longitudinal contraction; *Third*, the morbidly, or otherwise too adherent placenta; *Fourth*, the depressed fundus; *Fifth*, a torpor of the uterus, or an insusceptibility of ergotism from long-continued labour, or other causes not understood. Under the two heads of hour-glass and longitudinal uterus, we here include all irregular contractions whatever, by which the placenta is retained, as they all fall under the same pathology and general indications of cure, whether the coarctation pervade the whole volume of circular muscle, or be confined to a band of uncertain width, and whether this last be situated in the neck or the body.

Of the hour-glass and longitudinal uterus, it might be supposed they could be ascertained partly through the medium of the abdominal parietes, and partly by the common examination per vaginam with the mere finger. Thus it may be said that when the uterus reaches high up in the abdomen, and is contracted laterally, when there is no hæmorrhage, and the placenta cannot be reached by the finger, these irregular contractions are to be suspected. But every one must know that these circumstances do all very frequently obtain, when the contraction is at least sufficiently regular to expel the placenta without help, and therefore that any examination of this kind may often deceive. It may sometimes succeed in strongly marked cases, when the abdominal parietes are thin, and the accoucheur endowed with the *tactus eruditissimus*; but as a standing rule, and in ordinary hands, we hold that these contractions cannot be ascertained short of introducing the hand.

The uterus is sometimes found large, hard, and globular, and the unnatural stricture is so formed that the upper cyst lies buried among the intestines under the great mass of the womb, and though small, it may contain the greater part of a small placenta. This we have known in two instances. The womb felt imperfectly but regularly and firmly contracted when examined above the pubes.

When the uterus is felt to be well contracted, there may be a stricture near, or at the neck, which grasps the placenta, and prevents its expulsion. This mass is perceived by the finger, is felt to protrude a little with every pain, and hopes are entertained that it will be quickly delivered; but when the accoucheur has waited till all are out of patience with such unexpected delays, he introduces his hand and finds a stricture near the cervix uteri, and the prolonged placenta still adhering. DENMAN says that when the placenta is detached and fallen into the vagina, it may be left there to be expelled

by the after-pains. But it is very certain that when it has all the proofs possible of being detached, and even protrudes a little extra vaginam, it may yet be held fast by a contraction of the cervix uteri, and the entire separation be thereby prevented. This we have known, both in our own practice, and that of the midwives; it is also mentioned by Dr. DEWEES, and particularly treated of in his System of Midwifery.

In the longitudinal contraction, the uterus is felt through the abdominal parietes to be firm, globular, and well contracted; the placenta is felt by the finger, and appears to be descending with every pain; but when at last the hand is introduced, this mass is found to be embraced by a long horn-like process which grasps a portion of it and prevents its entire separation.

The kind of contraction which is present, cannot therefore be ascertained by any means that we know of, and if ergot is given, it must be at the risk of doing evil, rather than with the certainty of doing good. It is very true that in many cases, nothing could possibly be more appropriate, but to ascertain that if such be the case in hand, we hold to be altogether impracticable. Thus, a few nights ago we presumed that the uterus was most irregularly contracted; it felt as though there was a long process passing off in the direction of the spleen, and the placenta could not be reached with the finger, though the pains were frequent and pressing. On proceeding to the manual extraction, the uterine cavity felt regular, and the hand with the placenta was very gently expelled by a single pain. But on the contrary, we shall relate a case of hour-glass uterus in which there was every reason to believe the contraction to be regular, and therefore we tried the ergot once more in compliance with the best authorities, though altogether in contempt of our own principles.

Mrs. G. of G. was delivered of her first child about two months ago, after a tedious and painful but natural labour. She was very young, weak, and excessively irritable from the first, for which reason we did not proceed to the manual extraction as soon as we should have otherwise done. The womb was felt large, globular, hard, above the pubes, and the placenta, *as was supposed*, was reached by the finger. The natural pains did not supervene within one hour, though frictions had been frequently used, and therefore we gave thirty grains of ergot, in divided doses. Here we could not believe there was an irregular contraction, for the uterus was so large and globular, it appeared hardly possible that a portion of it could any where exist sufficient to form a separate cyst; it could not be at the fundus or body, which were felt so very distinctly, nor at the neck. for something

was felt by the tip of the finger, which was, as we supposed, the whole mass of the placenta.

The ergot brought on its peculiar depressing pains, but they gradually diminished after an hour, without having in the least protruded what was supposed to be the placenta, or having changed the shape of the womb, as felt above the pubes. The abdomen now began to swell, and though the woman was so irritable, from the first, as hardly to suffer us to touch her, we determined to wait no longer. The supposed placenta was discovered, on introducing the hand, to be a quantity of blood collected in the membranes, and it was found that the real placenta, which afterwards proved to be unusually diminutive, was enclosed in a very small upper chamber that seemed to reach almost under the sternum, and the contraction was so close that it tightly embraced the cord. Here was a deplorable business for a delicate and excessively irritable young lady, but there was only one method of proceeding, however painful. She passed at least fifteen minutes of most cruel suffering before she was relieved. Contrary to our expectations, she had a speedy recovery, and without any other backset than two or three fits of an habitual intermittent. How much better would it have been to have tenaciously adhered to the principles laid down in our former paper, and thus to have removed the placenta at the end of an hour, sooner or later! It is true, there might have been at that time, and no doubt there actually was, an hour-glass uterus; but it may be fairly presumed that the contraction was not so violent, and it is fully certain that all the parts were in a more fit state for the manual extraction, and the patient's mind far better prepared to suffer.

In cases of the morbidly adherent placenta, it is probable that some of the organ might be cast off by the powers of the ergot, and if the greater part should fortunately come away, and the practitioner be content with this state of things, there is hardly a doubt but that the rest might be separated by the operations of nature. This we conceive would prove more fortunate than the detachment by manual violence. See Smellie, Vol. II. Collect. xxiii. Case 2. But should the whole placenta remain, or the greater part of it, the patient would have to suffer all the torment inflicted by the ergot, and also to undergo the manual extraction, now rendered tenfold worse by delay and irritation.

When the fundus is depressed, and the womb in danger of inversion, of which the attendant can know nothing till the hand is introduced, the mischievous operation of the ergot is painful, even in contemplation. But it will be said, that the careful practitioner will

always ascertain this by an examination above the pubes. This is not absolutely certain in the mere depression, however possible it may be to do so in the complete, and even in the partial inversion. But even here, Denman says that in one case, (that is of inversion,) that was under the care of a person who might have been allowed to be a competent judge, and expected to act more wisely, when he applied his hand to the abdomen, the recession of the inverting uterus was mistaken for its contraction, and it was actually inverted, though he entertained no suspicion of what had happened. If this could happen in the hands of such a person as Denman speaks of, and that too in case of *inversion*, surely the mere *depression* might never be detected by half the practitioners, male and female, of the obstetric art.

But it may be said that this state of the uterus must always be within reach of the finger; certainly not always, though in deep depressions it no doubt may. Dr. DEWEES, *System of Midwifery*, 3d edition, p. 486, says, "I found the placenta *just within reach of the finger*, and attempted to withdraw it, but it gave great resistance and extreme pain. I now *introduced my hand*, and found a tumour resembling in shape and size the swelling at the bottom of a common black bottle, over which the placenta was spread." And again, p. 490, he says of another case, "I took hold of the cord and merely tightened it, on which she begged me to wait, as it gave her great pain. I traced the end to the vagina, and found at the os externum a placenta, I thought unusually dense and large. On gently attempting to withdraw it, as I thought it loose in the vagina, I found uncommon resistance, which I attributed to its bulk, and desisted from further effort, hoping the uterus would, by contracting, push it completely down. In this I was disappointed. I now expected that a more than common cause detained the placenta in the vagina, and began a more complete examination. I pierced the substance of the placenta with my forefinger, and tightened the cord; beneath the placenta I perceived a round, hard substance, which I but too quickly discovered to be the fundus of the uterus inverted."

The above cases show most clearly that the depressed fundus may exist without being ascertained by a common examination above the pubes and per vaginam with the finger only. To expatiate on the action of ergot in such cases is wholly unnecessary.

In our fifth and last state, we supposed the uterus to be insensible, or nearly so, to the operation of ergot. It happens that we never gave a dose of this medicine for the expulsion of the child that did not bring on strong pains; but in placental cases we have often been dis-

appointed, though the medicine was taken from the same parcel. It has sometimes failed entirely to excite the uterus, and not unfrequently it has superinduced some grinding pains that very soon died away.

There is another point of view in which ergot may not be considered entirely safe in placental cases, even when all the parts are in the most favourable state for its just operation. It may excite pains out of all proportion to the object to be attained, and which may not very soon subside. When we give this medicine for the expulsion of the child, its power may be in a great measure exhausted by the time the labour is finished; not so when given to expel the placenta, as this process is often quickly finished, and in such cases the ergot may expend itself in furious spasms or throes which may not be easily subdued, and may even end with a prolapsus, if not a procidentia uteri. We have never seen any thing similar, but Dr. Dewees, *System of Midwifery*, third edition, p. 620, and also in Vol. I. of this *Journal*, p. 258, relates a case precisely to the purpose. "A lady aborted at a little beyond the fifth month with twins. The involucre did not come away for several days after the expulsion of the embryos; but as they came off in *one mass* very soon after taking twenty grains of ergot, the lady could not be persuaded but that one of the placenta remained, and desired that another dose of the ergot might be given her. This I positively refused, but at the same time assured her that nothing remained to come away. She was, however, not convinced; for I had scarcely left the house before she caused another portion of the ergot to be given her. The consequences were a repetition of violent pains, and the escape of a considerable portion of the uterus through the os externum." In the next page the doctor says, "I am therefore convinced that much future injury has been sustained by giving this medicine in cases where there is little or no resistance to be overcome; for in such cases the increased efforts of the uterus continue after the child is delivered." This reasoning, we presume, does not reach those cases in which ergot ought to be given in very small doses merely to produce a tonic effect.

Now, when we take into consideration the various circumstances in which ergot cannot be used with propriety, any one of which may exist without the knowledge of the practitioner giving this medicine, and add to these the cases in which it will merely distress the patient with its peculiar grinding pains, and fail at last to effect its object without any assignable reason, we are ready to conclude that it is by no means applicable to the expulsion of the placenta. The only reason to be assigned for the use of ergot is, that it may supersede the

painful expedient of manual extraction. But here we must not forget that ergot itself is a painful expedient. The throes or spasms which it brings on are not natural, and are indeed hardly similar to labour. The woman always knows the difference, and expresses her impatience with them. This difference obtains more clearly in placental than in child-birth cases. Now suppose that an accoucheur has fifty cases a year of the placenta retained too long, and that he gives ergot in every one—the totality of suffering will be very great, and far greater than if he were to proceed to the manual extraction at a proper time; as the medicine must in some cases fail, most generally distress the patient even when it succeeds the best, will sometimes add strength to the irregular contractions, and will at all times occasion an anxious delay.

Nor is the influence of one example to be neglected in these cases. It seems to be the part of the midwives to abuse all the learning they casually acquire from the regular accoucheur, and most certainly they will not fail to provide themselves with a medicine apparently so very convenient. Whereas it is their business to send for further help in all cases of retained placenta.

After all that has been said, it must be confessed that the necessity of using either ergot or the manual extraction bears but a very small proportion to the totality of cases, and that a still smaller proportion of these will be subject to the various casualties which oppose the use of ergot; consequently an accoucheur may pass through a long and busy practice without encountering any of the evils, or doing any of the mischief we have here set forth. Hence, if the experience of others is in favour of giving ergot in these cases, it must surely be considered as owing to a more fortunate succession of suitable cases; the very next that occurs may disappoint their hopes, and change their opinions, may bring themselves and their patient into all the distress of an hour-glass uterus rendered tenfold worse by the action of ergot, and teach them the necessity of acting by known principles in pathology, rather than by the dictates of unprincipled experience.

Northumberland, Pa. Dec. 1828.

MEDICAL EDUCATION AND INSTITUTIONS.

ART. XIII. *Account of La Charité at Paris.* By ELISHA BARTLETT, M. D. of Lowell, Mass.

THIS hospital is considered the second in importance of the French capital. It was founded by Maria de Medecis in 1602, and its history, together with that of its church, from this time down to the revolution, is too long and uninteresting to be detailed in this paper. During the revolution it was called "*Hospice de l'Unité*," but since 1815 it has taken its former name. In 1786 there were two hundred and eight patients; there are now more than three hundred, upwards of two-thirds of which are male. This hospital, on account of its situation, its large and airy wards, and the judicious arrangement of the patients, has always given, in regard to its mortality, more satisfactory results than most of the others. The following statement of the average mortality in the principal hospitals, from 1804 to 1814, may not be uninteresting.

At La Charité, 1 in $7\frac{1}{10}$.—Hôtel Dieu, 1 in $4\frac{4}{10}$.—La Pitié, 1 in $4\frac{1}{2}$.—Saint Antoine, 1 in $5\frac{1}{2}$.—Cochin, 1 in $7\frac{1}{2}$.—Necker, 1 in 6.—Beaujon, 1 in $5\frac{1}{2}$.—Children's, 1 in $4\frac{1}{2}$.

The service in the surgical wards is performed by BOYER and ROUX, of whom we shall speak more at length hereafter. The principal physicians are FOUQUIER, LERMINIER, and CHOMEL. I am indebted to M. RATIER's practical formulary of the hospitals of Paris, for the following observations on the character and practice of M. Fouquier.

"This professor, whose visits are assiduously followed by a great number of students and physicians, exhibits in his practice that prudent *temporization* which knows how to leave something to the conservative efforts of nature, while, when it is necessary in order to save his patient from certain death, he is prompt and energetic in his measures. An attentive and scrupulous observer, joining a rare ingenuity to an exercised "*coup d'œil*," he distinguishes himself by the exactitude of his diagnosis, and the certainty of his prognosis, which he never gives till after a minute and profound examination. Far from seeking to astonish by a pretended perspicacity which would divine the causes of disease at first sight, he teaches, on the contrary, his students to carry into their investigations of diseases, a minute attention and a wise deliberation, which shall conduct to positive results, or at least enable them to avoid those errors which compromise the dignity of the art. His therapeutic is simple and rational, and if he some-

times gives himself up to experiment, it is always with that prudence and reserve imposed by conscience and responsibility.

"An absolute stranger to the spirit of system, and following the track traced by observation and experience, he has long taught, both in his courses of theory and practice, the frequency of phlegmasias, and the necessity of insisting on the antiphlogistic treatment, even when these diseases have passed into the chronic stage. He has also taught that the essential fevers of the ancients were very often merely symptomatic of local inflammation, though, in opposition to the doctrine of Broussais, he still thinks there exist essential fevers, that is, fevers in which the excitement is general, not showing itself in any one part sufficiently predominant to be considered the local cause of the disease. He has long exerted his authority against the abuse of tonics and stimulants in the treatment of acute maladies.

"In many diseases M. Fouquier follows a method peculiar to himself. In the painter's colic, for example, he has departed from the beaten track, and has added to a treatment of which long experience had demonstrated the efficiency those modifications pointed out by a rational therapeutic. Acute rheumatism is considered by him as an inflammation, and is treated accordingly; but he prefers the application of leeches and of cataplasms, aided by drinks lightly diaphoretic, and warm baths, to general bleeding; the latter, according to him, being followed by a long and tedious convalescence. This treatment has often succeeded in chronic articular rheumatism, which had produced partial ankylosis. In neuralgias in general he employs bleeding, general or local, followed by vesication, not on the course of the diseased nerve, as directed by Cotugno, but over the region of its expanded extremity.

"The number of *nervous* diseases so considerable for those who observe superficially, is very much diminished by this practitioner, who endeavours as far as possible to refer each series of symptoms to the lesion of an organ. Notwithstanding this reduction, however, those affections to which we are still obliged to apply the denomination *nervous* are sufficiently numerous. M. Fouquier admits the existence of *maladies purely nervous*, that is to say, in which our means of investigation have not yet been able to discover any material lesion, to which as a cause, they can be attributed. He professes this opinion in regard to asthma, which M. Rostan, of Salpêtrière regards as dependant on aneurism of the heart. In the treatment of nervous affections, such as epilepsy, hysteria, &c. he uses the narcotic extracts, as belladonna, hyosciamus, lactuca, and the prussic acid.

"The original predisposition to tuberculous and cancerous affections has been the subject of much controversy. M. Fouquier believes that in the greater number of cases this predisposition exists, but that the diseases ordinarily accompanying it, may manifest themselves altogether independent of such predisposition. In aneurisms of the heart and great vessels, his treatment consists in local or general bleeding; usually he has recourse to the latter in order to unload the vascular system, which he repeats more or less frequently according to the facility with which the waste of blood is repaired. He continues this treatment to the termination of the disease, and he has often seen venesection apparently save the patient from impending suffocation. This evacuation, far from augmenting the symptomatic anasarca, seems on the contrary to promote

the absorption of the effused fluid, and to second the action of diuretics. When this absorption is a long time delayed, and the skin has become very much distended, he makes with a sharp lancet incisions sufficiently deep to reach the meshes of cellular tissue, which produces a rapid diminution of the dropsical swelling. Long experience has demonstrated to this practitioner that there is no danger of the supervention of gangrene, but an indispensable condition is to divide entirely the skin instead of making a superficial incision. To these means are added a light regimen, some diuretics to arrest the progress of infiltration, and finally, preparations of squill and digitalis, which are considered not only diuretic, but proper, in acting on the sensibility of the heart to diminish the energy of its contractions.

“M. Fouquier has published but a small number of memoirs, but he has imparted to those persons who have attended his clinical lessons, the results of his labours on various points of practical medicine, and of his researches in relation to the properties of many articles of the *materia medica*, particularly the *nux vomica*, acetate of lead, the extracts of belladonna, cicuta, hyosciamus, stramonium, and lettuce, of the *rhus radicans*, the distilled water of the cherry-laurel, and prussic acid; researches, some of which have been already published, and the others of which will soon be presented to the Royal Academy of Medicine.”

The following is a brief abstract of the most prominent points in the practice of M. Lerminier, communicated by himself in a note to M. Ratier.

“I treat continued fevers by simple diluents, so long as no precise indication presents itself to be fulfilled. If there exists an assemblage of inflammatory symptoms, a state of plethora, I direct a general bleeding; if sanguineous congestions exist, I remove them by the application of leeches. It is to these various congestions that my attention has been particularly called in the course of fevers. I have often, for example, applied with great advantage leeches to the neck, or behind the ears, in the advanced stages of fevers, and even at a time when adynamic symptoms had become prominently marked. Whenever there is an abundant diarrhœa, I moderate or suspend it by the application of leeches to the anus. I have often seen after the employment of this mean, the stupor disappear, and the vital powers renew themselves. But when there exists a real adynamia, I have recourse to tonics, and the aqueous infusion of cinchona is the preparation which I most generally use. I apply at the same time revulsives. When I observe that assemblage of symptoms known by the name of *bilious*, I do not hesitate to employ emetics; they are particularly efficacious in abridging the cause of the disease.

“I combat acute rheumatism by general bleedings, *which I repeat a great number of times*, until the buffy coat has entirely disappeared from the blood or has become much less evident. Leeches in rheumatism relieve very well the pain in the part where they are applied, but at the same time it appears in another situation; this never occurs in opening a vein. I often hasten the resolution of certain pneumonias, which have a tendency to pass into the chronic stage, by substituting for simple demulcents some light tonic, and particularly a decoction of polygala and an aromatic confection. In painter's colic I follow

to its full extent the ancient treatment of the fathers of La Charité. I employ it with success, even in those cases where there exists considerable febrile excitement."

The practice of M. Chomel is much like that of M. Fouquier, except that he shows himself a more zealous partizan of the doctrine of fevers, and of the employment of tonics and stimulants.

Statistical Table from the Annual Report of 1822.

Whole number of beds, 323.

	Medicine.				Surgery.			
Men - - - - -	155	-	-	-	74	-	-	-
Women - - - - -	60	-	-	-	34	-	-	-

	MEN.			WOMEN.			Total general for 1822.	Total general for 1821.
	Med.	Surg.	Total	Med.	Surg.	Total		
In the hospital, Jan. 1, 1822	144	56	200	49	31	80	280	301
Admitted during the year	2,120	553	2,673	620	227	847	3,520	3,500
Dismissed -	1,746	490	2,236	465	215	680	2,916	2,956
Deaths - -	369	65	434	146	15	161	595	565
Remaining 31st Dec. 1822 -	149	54	203	58	28	86	289	280
Rate of mortality, one for	5.27	8.35		4.27	15.5			
Mean number of days in the hospital -	25	38		34	45			

The ages which gave the greatest number of patients were from eighteen to twenty-five.

It will be observed on comparing the above table with that of the Hôtel Dieu for the same year, that the rate of mortality at La Charité considerably exceeds that at the Hôtel Dieu. It will also be noticed, that the time during which the patients remained in the hospital was much greater than at the Hôtel Dieu, showing a greater proportion of chronic disease, and this circumstance explains in part the increased proportionate mortality. There are also at La Charité a large number of patients with pulmonary disease, which is sufficient cause for the more considerable mortality in the medical wards.

The visits are made at the same hours as at the Hôtel Dieu. Two mornings in the week are appropriated to operations, most of which are performed by Roux. It will be seen that the amount of surgery for 1822 was greatest at the Hôtel Dieu. This was not the case in 1826-7, the number of operations at La Charité at that time exceeding those at any other hospital in the city.

Surgery of La Charité for the year 1822.

Sutures - - - -	33	Removal of wens - - -	13
Abscesses of the anus - - -	11	----- of cancers - - -	17
Hydroceles by injection - - -	16	Sarcocele - - - -	11
Incisions for opening abscesses, &c.	53	Cataracts by extraction - - -	43
Luxation of humerus - - -	11	Fistula in ano - - - -	32
----- of elbow - - - -	2	Fissure of the anus - - -	7
----- of patella - - - -	1	Bronchotomy - - - -	2
----- of foot - - - -	3	Amputation of arm - - -	4
Strangulated hernias - - -	14	----- of forearm - - -	4
Paraphymosis - - - -	3	----- of hand - - - -	1
Incisions for whitlows - - -	27	----- of thigh - - - -	12
Fistula lachrymalis - - -	4	----- of leg - - - -	8
Introduction of catheter - - -	50	----- of foot - - - -	1
Lithotomy—lateral operation - - -	14	----- of fingers - - -	13
Removal of polypus - - - -	10	----- of great toe - - -	1
Resection of mucous membrane of		----- of penis - - - -	2
the rectum - - - -	5		

It will be observed in comparing the table of surgery of the Hôtel Dieu and La Charité, that there is a want of conformity in the proportion of certain operations at the two hospitals. This is the case in regard to operations for the stone. Patients afflicted with fistula in ano are mostly sent to La Charité, fractures generally to the Hôtel Dieu, where they are treated by position; and cataracts to the Hôtel Dieu and La Charité in nearly equal proportion. The applications for admission are all made at a general office, and the patients are sent to one hospital or another, according to the nature of their diseases, or other circumstances. This arrangement is of great utility, as it gives the surgeon an opportunity of testing the value of any particular method of treatment, and the student of witnessing and studying any class of diseases, or any particular practice. Thus, the cases of fistula in ano are sent to La Charité, because Roux considers it important to *remove* freely all the indurated and fistulous portion of the disease, and the cases of cataract are divided between La Charité and the Hôtel Dieu, in order that Dupuytren and Roux may test the comparative value of their methods of operating; the former by couching, and the latter by extraction. Cancerous affections of the uterus are sent to La Pitié, it being in such cases that LISFRANC has of late successfully resorted to amputation of the *neck of the uterus*.

The surgical department of La Charité is under the care of the veteran Boyer, and his son-in-law, M. Roux. Boyer has long been known in this country as an author, and his great work on surgery is probably the most complete system in any language. The translation published in this country is a mere epitome. The work was completed by the publication of the eleventh and last volume in 1827. This venerable old man, whose name holds no second place in the rank of distin-

guished living surgeons, was of obscure origin, and is indebted to his own exertions for his present proud elevation. He often gives his students a brief history of his career, somewhat in the following language:—"M. Dubois and myself came to Paris together. We pursued our studies in the same room, and we had but one coat which was fit to wear in public. When M. Dubois wished to go out he took the coat and I remained at home; and when I indulged the same privilege, M. Dubois was left at our room. I first became out-dresser of one of the hospitals, then one of the resident dressers, and now, behold me! (me voila!) surgeon in chief of La Charité, and baron of the empire!" Old age has left evident traces on the mind as well as the person of Boyer, though he still attends daily to the duties of his official station, and of his private practice. He operates occasionally at the hospital, though impaired sight and unsteady hands are unfitting him for the manual performance of his duties. During my attendance at La Charité he performed very well the operations of amputation, removal of the testicle and lithotomy. His clinical lectures on surgery are attended by a small number of students.

M. Roux as an operator is justly esteemed the rival of baron Dupuytren; and considering him merely as an operator, considering merely his skill and dexterity in the use of the knife, he is unquestionably his equal, and, in the opinion of most who have seen the practice of both surgeons, his superior. But "take him for all in all" as a surgeon, he is evidently far inferior to his illustrious contemporary. He is deplorably deficient in that most essential attribute of the accomplished and successful surgeon—sound judgment, or foresight—so well expressed by the French word *prevoyance*, and for the possession of which, I have already said, Dupuytren is particularly distinguished. Instances are frequently occurring of operations performed by Roux in cases which had been pronounced by Dupuytren beyond the resources of art. Roux's operations are unsuccessful to a melancholy extent; a result which I believe is justly attributable to inattention to those circumstances in regard to the situation of the patient which may diminish or increase the chances of success, and also to an improper practice subsequent to the operation—a fault which runs through the whole system of French surgery, which in the opinion of most American and English practitioners, adds in no inconsiderable degree to their catalogue of mortality, and of which more will be said hereafter. Roux appears particularly fond of tedious and difficult operations about the mouth and face, such as his staphyloraphia, and those done for the cure of deformities. There was an interesting case of the latter kind in the hospital during the

whole period of my attendance, eleven months, exhibiting a remarkable example of perseverance and determination on the part of the surgeon, and of fortitude on the part of the patient. This was a girl eighteen or twenty years of age, whose left cheek had been perforated by an ulceration following an attack of fever. The patient was in good health, and though the deformity was easily concealed by wearing an adhesive plaster, and though she suffered from it but trifling inconvenience, she was anxious that it should be removed, and M. Roux consented to make the attempt. I have no regular minutes of the case, but as near as I can recollect, the opening was about three-quarters of an inch in diameter. The first operation was that of paring the edges, and bringing them together with sutures and adhesive straps. This was unsuccessful. The same operation, after the expiration of some weeks, was performed on a part of the opening, and this was partially successful. After repeating several times these operations variously modified, which were always long and painful, without being able to close the aperture, M. Roux proposed attempting to fill it up by a piece of skin taken from the palm of the hand on the inner side. The girl, after due deliberation, and after many vain attempts to persuade some one of the students to substitute his hand for her own, consented, and the operation was accordingly done. The edges of about three-quarters of the opening were pared off, and the piece of skin still partially united to the hand, was neatly adapted to the opening, and well sewed in, and the hand and cheek strongly bandaged together. Strong hopes were now entertained of success, but the lady dreamed in her sleep, and started in her dream, and on removing the dressings at the end of four days, the piece from the hand was found entirely torn away from the cheek. But, nil desperandum! cried the surgeon; and the determination of the girl to have, if possible, a whole cheek on each side made her "nothing loth" to a submission to more cutting. The idea was now formed that a part of the upper lip might be made subservient to the much wished for consummation. The lip was accordingly slit down from the nose, and then divided up to the opening in the cheek. This piece of lip, after the necessary paring of edges, was turned up, and secured by ligatures in the perforation, thus successfully closing the cheek. But the left corner of the mouth, in consequence of this appropriation of the lip, was drawn out of place, so as to be situated nearly in front below the nostril, thus making the deformity greater than ever, and so placed that it could not easily be concealed. I left the girl in this situation, she having suffered a painful operation once in six weeks, or two months, for nearly a year, and then getting

ready for farther operations intended to remedy the deformity of the mouth. This case was witnessed by many American students, and is related as an illustration of one of the most striking peculiarities in the character of M. Roux.

M. Roux is professor of surgical pathology in the school of medicine. His manner as a lecturer is hurried and uninteresting. He was born in Gascony, and still preserves his provincial dialect and rapidity of utterance to such a degree as to render it extremely difficult for foreigners to understand him. He is of a nervous temperament, and exceedingly irascible. I have rarely known him go through his wards without scolding in good earnest a considerable number of his patients, and he seldom does an operation without treating his assistants in the same manner. Still he has great good humour, is very familiar with his students, and is popular and beloved as a man.

Lowell, Massachusetts, Sept. 15, 1828.

REVIEWS.

ART. XIV. *On the Nature and Treatment of Tetanus and Hydrophobia, with some Observations on a Natural Classification of Diseases in General.* By ROBERT REID, M. D. Licentiate of King and Queen's College of Physicians in Dublin, Member of the Royal Society of Edinburgh, &c. &c.

IN our last number will be found a lengthened discussion of that portion of the above work which relates to hydrophobia, with a pledge to give some further account of its contents. As stated on the former occasion, it is the importance of the subject of which it treats, and not the ability of the treatment, that has led us to select this diminutive and imperfect tract as the object of such elaborate attention. To redeem our pledge, we now proceed to the consideration of tetanus, the only remaining part of the work to which we attach the slightest value.

Nosologists now divide this disease into idiopathic and symptomatic, or traumatic, as it proceeds from general causes or is induced by the irritation of a wound. It was also formerly separated into species, according to the posture of the body when labouring under the affection: drawn forward, it was called *emprostotonos*—backward, *opisthotonos*—to one side, *pleurothotonos*, or *tetanus lateralis*—seated in the neck, *cervinus*—in the muscles of the jaw, *trismus*—and on a general rigidity of the muscles taking place, *holotonicos*, or *tetanos*. But these distinctions are no longer regarded, and the terms of course exploded, which at all times should have been viewed more as *jaw-breakers*, than designations of *locked-jaw*.

In treating the subject we shall confine our remarks to the traumatic form of the disease, considering it as peculiar in its character, and indeed as the only genuine tetanus. Those imitative affections arising from other agencies, cannot, with propriety, be embraced within the same view, either theoretically or practically, and should be designated by the title *tenanoid*, so exactly expressive of their nature.

Tetanus, in the sense in which it was originally used, is not appropriate to all the states of the disease, the muscles, indeed, being much more frequently affected partially than generally. But in the modern acceptation, it means any variety of tetanic rigidity, and as

thus by common consent, adopted, we shall, with this explanation, retain it.

To wounds, as the term *traumatic* implies, is real tetanus exclusively owing, though what particular character of the injury, or the texture in which it may be seated, is required for the production of the disease, does not very clearly appear. Lacerations of nerves, tendons, and ligaments are undoubtedly most apt to occasion it, and are well calculated to excite alarm under all circumstances. Yet injuries of this kind are often harmless, in such respect, while in other instances tetanus has followed lesions in other structures, and of the most trivial description. No wound, it may be affirmed, is exempt from danger, wherever situated—whether it be lacerated, or gunshot, or a slight puncture, or a clean cut, a contusion, or common ulcer, or inflicted by a surgical operation. Cases in demonstration of this remark are abundantly distributed throughout our medical records, and are familiar to practitioners of experience or reading.

The interval between the occurrence of the cause and the tetanic effect is exceedingly indefinite. Much depends on the constitution of the patient, its irritability or otherwise, and other states of system, as constipation particularly, the position in which he may be placed, a close, crowded, or an empty, ventilated apartment, the degree of temperature, and the sort of injury. These are all circumstances calculated to influence that event, as well as to heighten the general predisposition to the disease.

Tetanus is met with in all climates, though more generally in the warm and moist. It is very common in our extreme southern states, and of such rare occurrence in this city, that we have seen in twenty-four years' practice only three cases of it. Each sex, and every age and temperament are liable to its attacks. It is in the male, it is said, of irritable habits, that it oftener takes place, and particularly in the negro, which, perhaps, may be owing, in both instances, to a greater exposure to its causes, rather than to any constitutional predisposition. Climate also modifies the disease. It is milder in the temperate than torrid zone, independently of other evidence of which, Baron LARREY states that he found it far more intense, with a resemblance to hydrophobia, in Egypt, than in Germany.

The attack sometimes comes on within a few hours, according to CHALMERS, and there is a case reported by Professor ROBINSON, of Edinburgh, in which it was excited instantly by a scratch on the thumb from a broken china plate, ending in death in fifteen minutes after this slight injury. But its accession is usually at a much remoter period, several days at least, sometimes even weeks elapse,

and very often not till the wound is nearly or entirely healed, and free from pain and uneasiness.

It is stated by Sir JAMES M'GREGOR, in his Report on the Diseases of the British Army on the Continent, that if it did not occur before the end of the third week, the danger was over, and Baron Larrey tells us, that among the troops in Egypt, the fifteenth day was the latest period of its happening.

In its mode of approach it also varies, sometimes gradual and distinctly marked by prelusive symptoms, while more commonly its onset is sudden, without any premonitions whatever. Being a matter of much moment to be acquainted with these precursory signs, we shall indicate them in detail. They are lassitude and anxiety, want of sleep, faintings, a peculiar dejection of countenance, "more in sorrow than in anger," increasing in expression of melancholy distress—with præcordial or gastric uneasiness, and frequently constipated bowels. It has been remarked by RICHERAND, as also a preliminary symptom, that patients during sleep are very apt perseveringly to extend their limbs—and when the case is a little further advanced, there are twitchings, nervousness, some difficulty of deglutition, and, in turning the head, with pain at the scrobiculus cordis. The wound itself, may afford some useful information, it having been noticed by Baron Larrey as alarming when it becomes dry, and by a later writer, that it is not less so where it is covered by a darkish, unhealthy-looking sanies. Danger may be apprehended whenever the wound has an ill aspect, and especially if it be pallid and without inflammation. But it more frequently happens, that such premonitions are wanting, and the disease comes on abruptly by a sense of tightness about the jaws, neck, and tongue, with lancinating pains at the ensiform cartilage, penetrating to the spine, attended by difficulty of mastication and impeded deglutition. By degrees, all these symptoms become worse, the muscles of the neck are more violently affected by spasm, the abdomen is tense from muscular contraction, the head and trunk are drawn backwards or forwards, as the extensor or flexor muscles may be more strongly affected, or the body bent as a bow, resting on the head and feet, or to one side with the jaws at the same time firmly locked, or the whole muscular system being thus involved in a universal rigidity, the patient remains as a frozen corpse, with the forehead wrinkled, the eyes distorted, the nose puckered up, the cheeks retracted towards the ears, so as altogether to present a most hideous aspect. Not the least characteristic symptom in some cases, is an exquisite morbid sensibility, by which ordinary noises, or slight movements, or a draft of air, or a glare of light, is

felt, and causes the patient to be agitated and disturbed, or thrown into convulsions. The same effect is also experienced by attempting to swallow, especially fluids, the recollection of the suffering from which creates a reluctance to renew the trials, and all food is refused, in these several respects resembling hydrophobia. That such is the uniform severity of tetanus, is not meant to be conveyed. As in other diseases, it has gradations of violence, and the case described is of the most aggravated form of it. But mild as it may be, its spasms are terrible, recurring at short intervals, and accompanied usually with excruciating pain, re-excited sometimes by no evident cause, though more generally brought on by some effort, as changing the posture in bed, or endeavouring to swallow, or to speak, &c. &c. The spasms of tetanus differ from those of most other similar affections, in never becoming entirely relaxed, and hence are of that kind denominated *tonic*, in contradistinction to *clonic* rigidity. It is true that some remission may be perceived, though not sufficiently to yield to the action of the antagonizing muscles. The pain, we have said, of the spasms is usually intense, and such is the fact. But there is a singular case recorded by Sir GILBERT BLANE, in which in place of acute pain, a tingling sensation existed, rather agreeable than otherwise, ending however fatally. By the same writer two other anomalous instances are mentioned, where the spasms were confined to the side of the body in which the wound was situated.

It is said by CULLEN that this disease is seldom attended by fever, in which observation most of the authorities coincide. During the intensity of the spasms the pulse is contracted, hurried, and irregular, and the respiration is equally disordered, all subsiding, however, in the remission. The heat is not usually increased, though the trunk has been sometimes found hot, while the extremities were cold. Mostly the surface is pallid and damp, and collapsed. Delirium rarely attends it, and the *prima viæ* are sound, excepting torpor of the bowels, which constantly exists. The secretions and excretions are generally depraved, the urinary diminished, and the alvine large and much disordered. As to the duration of the disease, it varies considerably. CHALMERS tells us that it often ends in convulsions in twenty-four, thirty-six, and forty-eight hours, and very rarely exceeds the third day. By MORRISON we are informed, that in the West Indies he has known death to happen in forty-eight hours, and one case which endured for twenty days, ultimately proving fatal. It is stated by M'GREGOR, in the reports which we have before cited, whose experience was very enlarged, that death took place on the second, third, and fourth days, and even as late as the seventeenth and twentieth

day, though it was not commonly protracted beyond the eighth day. COOPER gives a case that occurred in a military hospital in Holland, where life was continued for five weeks. The patient usually expires in some vehement convulsion, though sometimes there is a relaxation of all the muscles eight or ten hours before the fatal event, with such other appearances as might warrant an expectation of recovery.

It is spontaneous or idiopathic tetanus, with which the traumatic form of the disease is most apt to be confounded. Even here, however, the difficulty of discrimination will not be found very considerable. Distinct from other considerations, to aid our decision, a reference to the mode of production of the case must generally prove adequate to the purpose. Traumatic tetanus is the product only of wounds, and it is easy to determine how far the case is dependent on that cause. To indicate the peculiarity of character of the other species of the disease, modified as it is by the variety of causes inducing it, would lead us into a minuteness of detail, neither pertinent to the occasion, nor sufficiently instructive to warrant the consumption of time. Caused by cold, operating on a previously heated system, which is the most common agency in its production, it is essentially of a rheumatic nature, and may be recognized as such by the retention of certain symptoms of that form of morbid action, disguised as it is by other phenomenon, not ordinarily belonging to it. Even more dissimilar to genuine tetanus, are those spasmodic affections brought on by the narcotic, and occasionally by irritating ingesta, or worms, and where any ambiguity exists, it will be easy to dissipate it by an inquiry into the circumstances under which the case took place. As to hydrophobia, to which in many of its aspects, it is sometimes closely assimilated, we formerly pointed out the most conspicuous difference, and on reaching the pathology of tetanus, the diagnostic signs will be made further to appear.

No disease is scarcely more fatal or less to be controlled than this, and our prognostications of success should always be cautiously guarded. CLARKE declares, and which declaration is supported by MOSELEY, that in the West Indies it is utterly unmanageable, he never having seen or heard of an authenticated cure. Conceding that this may not be strictly true, it still shows the extreme intractability of the disease. The results of our practice in this country, we suspect, would be very melancholy. Nor is the experience of Europe more encouraging. Every one who has written on the subject complains of the want of success, even in private practice, and we learn from the army surgeons, both of the Continent and of England, that the mortality was dreadful in their practice. Yet there are gradations of vio-

lence in the disease, and all cases are not equally dangerous. It is the opinion of LARREY, who had ample opportunities of determining the point, that opisthotonos, though of rarer occurrence, is invariably less curable than the other shapes of the disease, which he imputes to the pressure on the spinal marrow, and contraction of the larynx and pharynx when the head and trunk are thus thrown back. It may generally be stated that when the attack comes on gradually, and for the first three or four days the jaws are only slightly affected—when the abdomen is not preternaturally hard, or the bowels obstinately costive, the skin moderately warm, and some tranquil sleep is enjoyed, the countenance little changed, a free discharge of saliva, whether spontaneous or by mercury, hopes may be entertained of an eventual recovery. It is remarked by HIPPOCRATES that fever, with white, thick urine, denotes a crisis, the case henceforward ceasing, and to effect which was a leading indication with him. But on the contrary, if the attack be sudden and vehement, the muscles of the neck, back, and belly are rigidly contracted, with severe darting pains from the sternum to the spine, or the abdomen tense, and the least pressure thereon producing spasms, or there is an exquisite morbid sensibility imitative of hydrophobia, or the convulsions frequently recur, and the bowels remain unrelentingly bound, or the urine suppressed, and a cold, damp surface, with a very quick, irritated pulse, and distorted or otherwise materially altered countenance, the danger is most imminent, and we should be prepared for an unfavourable issue.

It has been observed that bodies which have died of tetanus run rapidly into putrefaction, and this may be one reason why *post mortem* examinations have been so rarely practised, and our information limited as to the appearances. It is, however, affirmed that effusions are sometimes found within the cranium, denoting the pre-existence of meningeal phlogosis, though oftener, no such evidence is to be discerned. More generally is to be seen inflammation in the mucous coat of the stomach about the cardia, in the tract of the œsophagus, including the pharynx, both of which contracted and covered with viscid, reddish mucous. The same appearances have been observed in the bowels, which, however, are oftener loaded with matter widely different from natural fæces. Lately, the spinal marrow has attracted attention, and most of those who have engaged in the inquiry, represent it as pretty uniformly inflamed, in some instances intensely so, with extravasations of coagulated lymph, and still more copious serous effusions. But this can hardly be claimed as a discovery. The same phenomena were noticed by FERNELIUS in idiopathic tetanus, and confirmed by others. LIEUTAUD expressly states that in

spasms and convulsions of this kind the spinal marrow is affected, and that a watery fluid is effused between the integuments. BELFINGER holds nearly the same language, and BURSERIUS declares that the principal seat of the disease is in the brain and spinal marrow, and more certainly in the latter. It is, however, affirmed by SWAN in a recent essay on the disease, that according to his dissections the ganglionic system is more than any other part concerned. Most of the ganglia, of the grand sympathetic, throughout its distributions, he uniformly found highly inflamed, and in other respects greatly changed from the healthy state, which appearances, he further says, he has since ascertained had been noticed by ARONSSON of Strasburg, and by M. ANDRAL, Fils, of France. He might have added LOBSTEIN, who also remarked them.

In considering the pathology of tetanus, perhaps little more at present can be assumed, than that it is primarily an affection of the spinal marrow, whether of simple irritation or active phlogosis, is not satisfactorily determined, though probably the latter condition ultimately predominates. That the disease is mainly located in this part, is abundantly shown, without any appeal to its symptoms, or the evidence of dissection, by the simple fact that it may be brought on in decapitated animals, merely by the insertion of a probe in the spinal marrow.

Thus far it resembles hydrophobia, and in the subsequent play of sympathies the analogy holds to a considerable extent. It seems however to differ in this respect, (determining from symptoms in contradistinction to the statements of Swan,) that the spinal nerves retain more exclusively the irritation, those of the cerebrum and ganglionic system suffering comparatively little. Nor is this the only dissimilarity. The muscles in tetanus evidently acquire a greater degree of irritability, and the irregular spasmodic movements are not of the same character in the two cases. Muscular action, natural or morbid, is influenced by nervous influence—and it is equally admitted, that spasm depends on opposite states of the muscle, a high or reduced degree of excitement, and is alike the result of inordinate stimulation and of exhaustion. The spinal marrow, the fountain of that nervous energy which the muscles receive as their incitement to action, may be so affected by morbid impressions, as to have its capacity to elaborate this energy invigorated or weakened, and hence applied to the muscles in excess, or the reverse, and consequently the one or the other sort of spasm takes place. Comparing what is observable in the two diseases in relation to this point, we think we shall be led to the conclusion, that while in hydrophobia the nervous supply is diminished,

there is a redundancy of it in tetanus. In support of this inference the fact may be appealed to, that the spasm in the one instance is milder, followed always by relaxation, whereas in the other, it is violent in the extreme, and nearly unrelenting.

It has been intimated as a further distinction, that the cerebral and ganglionic nerves are more implicated in the hydrophobic than tetanic affections. Looking at some of the phenomena in hydrophobia, the heavy congestions which occur in the brain, the lungs, and, occasionally, in the abdominal viscera, we have additional proof of a defect of nervous energy. Experiments demonstrate, as mentioned in our preceding review, that whenever there is a want of such energy, by destroying the nerve, or in any mode intercepting the supply, the organ labouring under the disability uniformly fills with dark blood—and are not such the appearances in hydrophobia? It may be true, that occasionally, the great sympathetic and its connexions become involved in tetanus, contrary to its general tenor and character. By Mr. ABERNETHY such a view seems to be entertained, and in explanation of the occurrence, he supposes, that during the irritable state of the wound, the digestive organs particularly are deranged, which condition reacting on the injury, even after it has healed, or is apparently doing well, revives the disposition to tetanus, and the nervous system generally is involved.

It being universally conceded that little can be accomplished towards the cure of tetanus, every care should be practised to obviate the occurrence of the disease, and this consideration will first engage our attention. The wound should be examined, and all sources of irritation, as dirt, and other extraneous matters removed, and, under certain circumstances, it may be proper to dilate it, and particularly where a nerve has been partially divided. To induce healthy inflammation in the injured part is deemed of the highest importance, and with this design, a pledget of lint soaked in the spirit of turpentine, is perhaps the best application which can be made to it. This end being attained, suppuration should be promoted by an emollient poultice—and if there be much local pain and irritation, laudanum may be added to it, and a dose of it exhibited internally. Next the bowels are to be evacuated and kept in a soluble state. As a prophylactic, a mercurial course has been recommended by Clarke and other writers, particularly after a surgical operation. But it is probably ineffectual, as cases of tetanus have occurred during a salivation for another disease—and it might be even positively pernicious by increasing the irritability of the system. The diet is to be nutritive, rather more cordial than usual, and with an increased quantity

of wine for a few days. Need we say, that all the predisposing and exciting causes, formerly pointed out, should be studiously avoided.

As to the treatment of the disease itself, it is a subject replete with difficulty. Every plan has occasionally succeeded, and every plan has more frequently failed. Called to a case, this moment, we should really be embarrassed what to do, and must, therefore, present more a review of the several prevalent modes of practice, than indicate any definite course confidently to be preferred. Nor are doubt and hesitation in this respect peculiar to ourselves. No candid practitioner holds other language, and in perusing the various treatises on the disease, we shall see one uniform attempt to determine, amidst the most contradictory accounts of the remedies, which, on the whole, has been attended with the least ill success. Entertaining the conviction that the disease is purely of a symptomatic nature, excited and maintained by the irritation of the injury, it was reasonable to presume, that by doing away the cause, the effect would necessarily subside. Conformably to such a view, which has long been entertained, is in part the treatment of tetanus. Topical applications however, of a very different kind are recommended. By some it is proposed to lay open the wound, and fill it with the spirit of turpentine, or to dress it with the epispastic ointment, or to apply the potential or actual cautery to it—while others recommend sedative and soothing measures, as an emollient poultice, or a cataplasm of tobacco, or lint wet with laudanum. It is obvious that these opposite means must be suited to very different conditions of the injury, either as it is indolent or irritable, and the one or the other is to be preferred accordingly. As an extension of the same principle, amputation has been strenuously insisted on by Baron Larrey, by whom some instances are adduced of its success. But it has failed in other hands, and particularly in those of Sir Astley Cooper, who has publicly protested against it, in which denunciation there seems to be a pretty general concurrence of surgical authority. The fact is, that all these local remedies have proved very precarious, and are held of doubtful utility. Nor perhaps is it very difficult to assign a reason for it. To be of service they must be resorted to very early in the inchoate state of the case, since after it is formed, or in other words, the morbid impression pervades the system, it becomes independent of the primary irritation, and the removal of it, even if it could be effected, were nugatory.

Equal uncertainty prevails as to the most eligible general or constitutional mode of managing tetanus, every internal remedy having

proved as unavailing as the topical means described. Three plans of practice are now pursued by the profession, amidst numerous empirical suggestions occasionally adopted—and from the irreconcilable hostility of principle which dictates them, we are entitled to infer that they are all wrong, and the cures claimed under each, are as much to be ascribed to the resources of nature, as to any remedial efficacy. The first of these plans is by the narcotic substances, the best of which is opium. To doubt entirely its success, especially in mild and lingering attacks, would be unwarrantable scepticism. It too often fails, however, and seems only to have been of advantage when commenced early, and in very large doses, frequently repeated. The quantity indeed sometimes given, is so enormous as to exceed credibility, were we not aware of the great expenditure of susceptibility in most of these affections. It is to this circumstance, the loss of susceptibility to remedial impressions, that our want of success is perhaps in a great measure to be imputed. The stomach indeed seems to become exanimated, or to be deprived of most of its vital capacities. Medicines introduced into it, neither act on it, nor are acted upon. Dead matter lies inertly on dead matter. It were easy to demonstrate this proposition by diverse testimony, could we descend to such details. But a single fact may suffice, which is supplied by Mr. Abernethy, who states, that in a case under his care, where thirty drachms of opium were given, the whole was found after death, in the stomach, undissolved or otherwise changed. Combinations of opium, with musk, or camphor, or ether, are a favourite remedy with some, the utility of which is questionable. Most other antispasmodics have had a trial, including the warm bath, and with results not encouraging. The latter sometimes is temporarily tranquillizing, though never curative—is very apt by the disturbance of the patient to bring on violent spasms—and death has occurred from it. As a part of the same system, we may here include with propriety emetics, either to vomit, or in nauseating doses, and also relaxing enemata. No advantage we suspect has been derived from the former, in either mode of exhibition. The latter, however, are perhaps deserving of attention. An infusion of tobacco administered in this way has cured several cases of the disease in this country, and though it failed in the British military hospitals, it is not spoken of contemptuously. The fumes we should prefer. By an injection of tartarized antimony, we have reason to believe, we once relieved a case of traumatic tetanus.

The reverse of this course of treatment is also practised. Believing the disease to be one of debility, powerful stimulants are directed, as wine to the amount of several quarts daily, and as is alleged,

with occasional success. But hard as it is to question these statements, coming as they do from respectable sources, they are not too hastily to be received. Laying other objections aside, how could so much fluid be taken by an individual with *locked jaws*, where it is often difficult to introduce the smallest portion, and every effort of swallowing produces convulsions? Credat Judæus, &c. Medical testimony is fallacious, and not to be relied on, even where veracity cannot be impeached.

As a modification of this plan, tonics have had the confidence of some practitioners, and more particularly the Peruvian bark, the cold bath, &c. They too "have been weighed in the scale and found wanting." There was a time when cold water in every shape of application, had great repute, and not a few cases might be adduced of its efficacy: but it is now pretty much exploded. The army surgeons both of France and England, declare that it is worse than useless.

Notwithstanding the repudiation of the practice, it may not be uninteresting to notice the chief authorities by which it was sustained. As early as the time of Hippocrates it prevailed, by whom, indeed, it is declared, that affusions of cold water constitute the very best treatment, though he positively excepts traumatic tetanus, in which he deemed the practice pernicious. But without any such limitation it has been greatly extolled by many modern writers, among the most distinguished of whom are Wright and Currie. The mode which they pursued was to plunge the patient into cold water, and keep him in it till nearly exhausted, by which muscular action became relaxed. Even admitting that a few cures were thus effected, the counter-vailing evidence is so great, that the remedy has lost confidence, and as just stated, is no longer employed.

Nothing can more strikingly prove the unsettled state of opinion on this subject, than the recommendation of depleting and evacuating measures in this disease. Moseley says that the Spanish surgeons in the colonies bled their patients, when plethoric, in both arms and legs, and of late some very distinguished practitioners have become advocates for venesection in the early stage of it. Larrey has published several cases illustrative of its good effects, and M'Gregor has done the same. Dickson, an authority of scarcely less weight, thinks, "that in a full habit, when the wound is swelled, inflamed, and painful, bleeding and free purging, with such other means as are calculated to allay the general and local irritation, afford the fairest chance of arresting the danger." Distributed throughout the periodical journals, there is considerable evidence of similar purport. On the other hand, it has been tried in numerous instances, and with the

most decided injury. DE HAEN, who experimented largely on the subject, among other remedies, resorted to venesection, and in one case carried it to the amount of one hundred and thirty ounces in twenty-four hours, and killed the patient.

As to purging, it is well known that Hamilton has given the most unqualified commendation to it, in his celebrated treatise on purgatives, sustained by much concurrent testimony from other sources. It is a practice, in our opinion, deserving of much attention, and in which we are supported by Mr. Abernethy. That great practitioner declares, that he "is convinced in tetanus and all nervous affections, it is a most material point to operate on the brain through the digestive organs, and that producing secretions from the alimentary canal has a more beneficial effect in tetanus especially, than any other means we can employ." It is confessed to be decidedly useful in trismus nascentium, and, from analogy at least, we may conclude it might prove so in the other species of the disease.

What shall we say of mercury, a remedy *sui generis*, which at one period inspired universal respect, and was as universally employed? Long had its reputation been on the decline, when it came to be completely extinguished by the reports of the medical men attached to the service of the late belligerents of Europe. No trial of it could have been fairer than was made by them, as well internally as by the most copious inunctions, and without any success.

Not altogether dissimilar to mercury, in some of their properties, are the preparations of arsenic and lead, each of which has been used in this disease. We had formerly here a graduate from Virginia, who gave us in his thesis, several cases of tetanus cured by his preceptor with Fowler's solution and laudanum, and on the suggestion of JOHN HUNTER, the acetate of lead has been tried, though we doubt successfully.

Conforming to the present pathological view of tetanus, that it is mainly seated in the spine, is the practice which seems most eligible. Topical bleeding, blistering, or issues by moxa, or the common or actual cautery, throughout the vertebral column are the remedies proposed. These would appear to promise well, and some cases are reported in the writings of Europe and this country of their success. But really, though claimed as such, their is nothing new in the suggestion. We have already seen that a similar pathology is to be met with in several of the old authorities, and sixty years ago, a surgeon of the name of CARTER published a case of tetanus cured by the application of a strip of epispastic plaster along the whole of the spine. It may be further learnt from Moseley, that it was a common practice

in the West Indies, more especially in the Spanish and French islands, to dry cup the spine, shoulders and breast, or deeply to scarify these parts and dress them with irritants, or at once to resort to cauterization. As the result of all our inquiries and reflections on the subject, we should now be led to adopt this revived course, aided by the liberal use of opium, taking care at the same time, to preserve the bowels in a laxative condition, and, perhaps, under certain circumstances, resorting to relaxing enemata of tobacco, or emetic substances. These failing, we would endeavour instantly to induce the most copious diaphoresis, by the Dover's powder and vapour bath, to be kept up for a length of time, which seems plausible in theory, and has actually proved serviceable, on the authority of some cases reported by LATHAM, an eminent physician of London. It is on the same principle that the sand-bath has been lately proposed by STEDMAN, of one of the West India Islands. Great, and sometimes insuperable difficulty will be opposed to the exhibition of medicines by the mouth, from the fixedness of the jaws and impeded deglutition. The œsophagus tube cannot be used, even where the mouth may be open, since experience shows that all attempts to introduce it have been foiled, by the violent spasms and convulsions it excites. The rectum, therefore, is the only medium left in such an emergency.

Nor would we, while conducting this general treatment, neglect to call into requisition as auxiliary to it those local means, particularly pressure by the tourniquet, &c. which were indicated under the head of hydrophobia.

It may be proper, at least, as a matter of some curiosity, merely to allude to an extraordinary practice among the inhabitants of the Tonga, or Friendly Islands in the south Pacific Ocean, among whom we are told traumatic tetanus prevails to a great extent. It consists in producing a considerable degree of irritation in the urethra, and a discharge of blood from that part by the introduction of a reed of proper size, for some distance into the canal, and when the case is very violent, by passing a cord along the urethra through the perineum, the two ends of which are occasionally pulled to and fro, inducing great pain, and a copious hæmorrhage, with much swelling and inflammation of the penis. By Mr. MARINER, from whom we derive the account of this strange and unpromising practice, it is stated that he witnessed two cures of confirmed tetanus from it. Every fact relating to the treatment of this disease is interesting, and without advising this precise mode, it may suggest a principle capable of improvement. It was indeed somewhat on this principle, that Dr.

BROWN of Lexington, many years ago proposed exciting strangury in tetanus as a cure, and bore some evidence to its efficacy.

In closing a discussion in which so little practically useful has or can be said, we perhaps owe an apology for the length to which it has been extended. Though it may be true that we leave the subject in nearly the same obscurity that we found it, we cannot so far depreciate our labours as to presume them worthless. Humble as is the service of him who merely clears away rubbish, and removes difficulties, he is not without merit. We have endeavoured at least to prepare a site on which others may hereafter erect a glorious edifice.

N. C.

ART. XV. *On Difficult Cases of Parturition, and the use of the Spurred Rye.* By W. MICHELL, Member of the Royal College of Surgeons, London. Printed for Thomas and George Underwood, Fleet street, 1828, pp. 128.

Researches respecting the Natural History, Chemical Analysis, and Medical Virtues of the Spur, or Ergot of Rye, when administered as a remedy in certain states of the Uterus, with a Coloured Engraving. By ADAM NEALE, M. D. Physician to his Majesty's Forces, and to his late Royal Highness, the Duke of Kent, &c. &c.

THERE is no substance of modern introduction to the *materia medica*, that has so entirely engrossed the attention, and divided the opinions of medical practitioners, as the *secale cornutum*, or the ergot of rye. From the moment that the public were made acquainted with its real, or attributed virtues by Dr. STEARNES, it has not ceased an instant to claim general investigation, and to elicit the opinions of all obstetrical practitioners upon its pretensions. So general has this feeling prevailed, so interesting have its powers appeared, and so ardent has hope been to find all its imputed virtues realized, that every one who had the charge of females in particular, under their care, felt that they would not be rendering justice to their patients, did they not exhibit this substance when either difficulty or delay attended the parturient function.

The pretensions of this drug were so imposingly set forth, and so generally justified by the experience of those who had made trials of it, that its adoption in practice was as sudden, as it was universal. The timid and the daring, alike became its advocates, and with such

concurrence of belief in its efficacy, that the most sceptical yielded assent, or but feebly opposed the general impression in its favour.

But this state of things did not last long; for the ergot, like every other sublunary good, was soon abused by improper trials, and was accordingly condemned, derided from unfair experiments, as possessing no earthly power; or stigmatized from incautious exhibitions, as mischievous or deadly. Hence, the discrepant testimony at this moment, of the powers of this medicine.

In thus briefly summing up the discordant opinions of writers upon the ergot, we mean not to impugn the honesty of any sentiment expressed upon it, though we are sincerely of opinion that it does not merit the obloquy heaped upon it, as the faults imputed to it have arisen rather from its empirical application than from any feebleness of powers, or absolute noxious qualities.

From all we have learned from our experience, or can learn from that of others, we are persuaded that the advocates of the ergot have betrayed in many instances ultra admiration of its powers, while those who disparage them, or declare them to be injurious, have allowed themselves to be led to conclusions at variance with general experience or positive evidence. The admirers, therefore, of this substance expect too much from its powers, while its detractors hope too little.

To the former class belongs Mr. MICHELL, the author of the work, the title of which heads this article. In noticing this work, we feel we have undertaken a most ungracious task, as we find very much more to condemn than to approve; yet the position we occupy, seems to make it obligatory upon us to give our candid and deliberate opinions upon works of this kind, so soon as the opportunity presents itself. This duty appears to us to be more than usual imperious, as the work in question has been much lauded by different reviewers on the other side of the water.

In prosecuting our task in the manner we have thought right, we entirely disclaim all hostility to the author; he is entirely unknown to us; our sentiments upon the subject in question differ widely very often from his, and to express them, we feel a privilege to which we are entitled, by every right which a publication gives to those who may venture to review it. We had much rather applaud than condemn, when the choice is put in our power; but in the present instance, we are deliberately of opinion that the work before us is in many instances inconsistent with itself, and but too certainly calculated, if the doctrines promulgated be acted upon, to do injury instead of good.

In this charge we do not confine ourselves to the mere *modus ope-*

randi of the ergot, or its very frequent, and, as we believe, unnecessary exhibition; we include a number of the principles or doctrines entertained by the author, as well as several very reprehensible practical manipulations. In a word, we have rarely if ever seen so many ill-digested opinions, or so many dangerous practical inculcations in the same number of pages.

We do not hesitate to ascribe to the author the greatest purity of intention, and the most ardent desire to promote the public good; but we cannot help being of opinion that, however pure his aim, he has greatly missed it, in recommending his own practice for imitation. His temerity, (for such we must consider it,) in many, has nevertheless in some instances, removed several very severe charges against the ergot, and which may be taken as so many important practical truths; these we shall have occasion to remark upon as we proceed.

In conducting the subject of his essay, the author has thought proper to treat upon a variety of subjects, some of which have no direct bearing upon the point in question—therefore, strictly speaking, it is not an essay upon the *modus operandi* of the ergot, or an exposition of the cases proper for its exhibition, but a melange of crude physiological notions, and practical illustrations of the *effects*, rather than of the *utility*, of this drug in cases of labour.

As this essay is divided into a number of chapters, as well as the relation of many cases, we shall proceed to consider them separately, with the exception of the two first chapters. The first of these is entitled “On Puerperal Convulsions;” we do not notice this chapter, because it would lead to too long a discussion of what we conceive to be errors in pathology and practice. The second chapter proposes to take “A General View of the Process of Labour, with a particular reference to its Expulsive Force,” &c. &c. But as we do not find any thing new or interesting in this chapter, we pass it also in silence.

In page 1 of the preface he says “the reader is not to expect from the following pages a complete treatise on the difficult cases of parturition, and still less any thing like a system of midwifery. They contain merely some few practical hints on the lingering and laborious cases which will occur to every medical accoucheur in the course of his practice, and in the treatment of which he can derive little assistance from the professed treatises on the subject of midwifery in general.” This is a heavy and severe charge against the experience of a BAUDELOCQUE, a SMELLIE, a DENMAN, &c. and it is one in the justice of which the author himself does not appear to believe. For he, in the very next page, says with every appearance of candour,

that "no one modern improvement in medical science has, in my opinion, conferred so great a benefit on society in general, as the superior skill, information, and talent, at present directed to the science of midwifery." If the cases of difficulty to which he alludes, be not well treated of "in professed treatises," how has "society in general" been benefited by the "skill, information, and talent," at present directed to the science of midwifery—for it is to be presumed that cases which are not "lingering and laborious," will require no extraordinary skill or talent for their management.

He very strongly declaims against mechanical means in the practice of midwifery, and says that "recourse is too frequently had to them upon trifling occasions, and sometimes even when the uterus is the part that requires assistance," p. 1. of introduction. We are decidedly of opinion that the clamour against the use of mechanical agents, especially the forceps, in the practice of midwifery, has almost exclusively arisen from the mal-adroitness of the operator, rather than from a just or well-grounded objection against the action of these instruments themselves, or the occasional but absolute necessity for their employment. We are firmly persuaded that the forceps, when properly managed, have saved the lives of thousands, and have never, when well conducted, done injury to the mother, so far as we have observed.

We therefore cannot but condemn such sweeping proscriptions of the forceps, as we are every way sure that much mischief has arisen, and much will yet follow, if the precept that is so evidently inculcated be acted upon. To the practitioner who has deliberately made up his mind on this subject, from the study of the principles which should govern the use of these instruments, and from well-directed experience and correct observation, the objections of Mr. M. will perhaps have no injurious effect; but to the young and inquiring, they will be mischievous, by rendering his duty uncertain, and his conduct vacillating, at a moment that requires all his firmness, and his most prompt decision.

Upon this point we are entitled to speak; because we have had repeated opportunities to witness the mischievous effects of that uncertainty which arises from the conflicting opinions of writers upon the best mode of terminating a given labour. The moment for acting with success to both mother and child, has been lost, never to return. A temporizing plan has been pursued, until a decisive one would no longer be availing; the *ergot* had failed; the head had rested many hours upon the soft and sensible parts of the mother; they become tender and inflamed, and these necessarily become augmented by the

mechanical means which must now be had recourse to; gangrene and sloughing follow. We speak from observations, upon this point.

But this is not all; the forceps are declared with much propriety to be the means by which the life of the mother and child are to be saved; and in judicious hands they deserve the high character just given. To enable them, however, to fulfil these express intentions, requires a proper estimate of their necessity; a skilful application of their powers; and a well-timed moment for their employment. Without these observances, the life of the child may be forfeited, when it was very possible to have saved it by a judicious use of the forceps. Had Mr. M. only condemned the rash and unnecessary use of these instruments, he would have performed an acceptable service, and we would most willingly have joined issue; but to reprobate the use of an important means, because it may be, or has been abused, is no less mischievous, than unfair: and were this the mode to be pursued upon all important occasions, our art would soon be left without any, or with but very few resources. Nay, the virtues of the very remedy which he has laboured so hard to exalt, might soon be questioned, or be made to sink into disrepute.

Indeed we are not certain that this time is not fast approaching; for it will only require a few more *friends*, of equal zeal with Mr. M. to hasten the downfall of the ergot, or to bury it in oblivion. His purported object is to prove that this substance produces a relaxation of the os uteri; we shall see presently, how well he has succeeded in his attempt.

Besides, Mr. M. himself confesses, that "lingering labour will frequently exhaust a woman's strength, when the presentation is right, notwithstanding all our attention." p. 18. If this be true, it can only be in instances where patience and a reliance on the powers of nature, (which were not realized,) superseded the trial of skill, in the well-directed use of the forceps. For we must insist, and this quotation bears us out, that there are cases precisely as stated above; and where even the ergot, with all its admitted powers, has failed. This is not a supposititious case; we know the fact: if this be admitted, would it not be criminal to permit the woman's strength to be exhausted from a repugnance to use measures which may in improper hands be abused?

What excuse can Mr. M. make to the public for neglecting the only means that could be employed for the preservation of the mother and child? namely, the forceps. For it is to be presumed, that so warm an advocate as Mr. M. is for the ergot, must have employed this substance and it had failed, when he declares, that a lingering labour,

even when the presentation is right, "will frequently exhaust the woman's strength, notwithstanding all our attention." Will his abhorrence to the use of the forceps plead a justification of his conduct to a husband, who has been bereaved of a beloved wife, because he had an aversion to the employment of instruments?

Or, if the woman do not perish in the act of giving birth to her child, what atonement can Mr. M. make to her for the following consequent evils. "A long confinement of the head in the pelvis is equally dangerous to the mother and to the child; by its pressure against the soft parts it stops the circulation, bruises the soft parts, and *often* brings on sloughing and gangrene." We again ask, what reparation can be made for the ravages his negligence has created? Or how would Mr. M. prevent these evils happening, but by the forceps, applied with due skill, and in proper season? This he does not condescend to inform us of; he only declaims again, by saying, "when *dangers* of this sort occur, I would not advise the forceps, as I verily believe that more lives have been lost than saved by the use of them," p. 18. He farther adds, "because delivery may be expedited by them, they are often had recourse to without the slightest occasion;" therefore, (for this is the obvious conclusion,) because these instruments may or can be abused, or used when "there is not the slightest occasion," we must not employ them, where the woman's strength would be exhausted by the lingering nature of the labour. Can any doctrine be more absurd, or more truly dangerous.*

But it may be said that Mr. M. has provided against this conclusion by the observation which immediately follows; "from the cases I shall hereafter introduce, it will appear, that whilst we have medicines which will expel the child naturally, there can be no good reason for the use of instruments, which often occasion sloughing and death."

* Will Mr. M. contend that any attempt to excite the uterus, is more dangerous or even more fatiguing to the patient, than his method of provoking uterine effort? He says, p. 42, "*When I found the os uteri thick, rigid, and unyielding, or when I found it deep, thin, and flaccid, I passed up the hand, and introduced first one finger, then another, and so on, until I had introduced the whole hand, then opening the hand, and fully dilating the parts, I withdrew it without lacerating the membranes, and never interfered again, until I suspected that the membranes required rupturing, or the head in perinæo, which in a few hours will assuredly be the case, if no impediment exists*"!!! This practice approaches nearer to an impossibility than any thing we have ever met with—the whole hand is forced through a rigid os uteri, finger at a time; the os uteri made to dilate by opening the hand; and *the hand withdrawn without rupturing the membranes!!* to say nothing of the pain that this must create during its performance, or the consequence that must necessarily follow such violence!!!

Now it must be evident at first sight, that we have not wrested Mr. M.'s meaning, when his acknowledgment is recollected, that the woman will become exhausted by the lingering nature of the labour, (the presentation right,) "notwithstanding all our attention." In such cases what has become of his "medicines that will expel the child naturally?" If he has withheld them, he has become criminal; if they had failed, he was no longer in possession of medicines that "would expel the child naturally;" he would therefore prefer that the woman die, rather than use a certain and safe means to relieve her.

Does not Mr M. go beyond the truth of all observation, when he declares that the forceps *often* produces sloughing and death? In cases of sloughing after the use of the forceps, was not the mischief done before they were resorted to? If it was, the forceps are not chargeable with it; if it was not, it could only have arisen from maladroitness, which should not be considered as necessarily connected with the instruments themselves. Moreover, Mr. M. as we have just shown, has declared that sloughing and gangrene, take place without the forceps having been used.

Besides, we know of no authority that supports Mr. M. in these assertions; certainly, he will not find such a condemnation in the best writers upon this branch of medicine. For neither LEVRET, BAUDELOCQUE, LEROUX, GARDIEN, nor MEYGRIER, among the French, make any such charge against the forceps; nor, will he find himself borne out by the most respectable authors of his own country. Indeed, we know of no British writers that have even disparaged these instruments, if we except DENMAN and OSBORNE. The former, however, acknowledges their utility; and has laid down limited rules for their employment; while the latter makes the indications for their use so extreme, as almost to proscribe them: with these exceptions, we may say with much confidence, that the judicious use of the forceps, have been looked upon as one of the most important improvements in midwifery.

We fear, that Mr. M.'s aversion to the forceps, has prevented his acquiring sufficient dexterity in their application, to render them auxiliary; or, perhaps, even safe in his hands. He certainly *appears to be ignorant* of the proper cases for their employment, as laid down by the most experienced practitioners, of either his own, or other countries; or he would never select extreme cases to support his objections.

It never has been contended for, by the warmest advocates for the forceps, that they are eligible or proper, in all cases; and especially in such deformities of the pelvis, as would forbid the hope of bring-

ing the child into the world alive. On the contrary, they are expressly forbidden, where the pelvis has not full three inches, in its antero-posterior diameter.

Nor must the young practitioner be seduced into the belief, that the only merit of an accoucheur consists in the passive, (but oftentimes destructive,) watching, of the long-continued, and severe conflict, between the natural powers, and opposing difficulties. For he must be instructed to feel, and to know, that it is sometimes as hazardous to wait beyond a given period, as it would have been rash and injurious to have interfered at others. As far as our own experience has gone, we can without mental reservation declare, that we have never witnessed the smallest injury to follow the use of the forceps, when these instruments have been judiciously employed; and we have seen them several times used, even by young practitioners: though, we unreservedly confess, we have known accidents of a fearful kind take place from the hands of the ill-instructed. But, does not the same thing happen from any important operation, when ill performed?

It may be thought, by those who have not made midwifery a study, that we have dwelt unnecessarily long upon this subject; with such, we are willing to plead guilty; because, we are sure, we shall not be censured by those, who have felt how uncertain and limited the means are, in some instances, to preserve the life of both mother and child. To deprive such, then, of the only resource which art presents us with, by a wrong estimate of the powers and safety of the forceps, would be as cruel as it would be dishonest; for we must insist, and repeat, at the risk of being tedious, that safety in these cases, depends upon the forceps alone. We speak this from ample and often-tried experience; and we are sure, it will meet the concurrent testimony of almost every practitioner in this country. For, who has not seen the head linger for hours at the inferior strait, even after the ergot has been perseveringly and faithfully tried! And, where the child would have inevitably perished, but for the timely and triumphant aid of the forceps. We would ask what Mr. M. would do, when the head of the child was at the inferior strait; when the uterus was passive, or so feebly exerted as to be altogether incompetent to the end; when the ergot had been liberally employed, but had failed to renew the exertions of the uterus! Would he wait until his patient expire, or the child die, before he would use the forceps? for this is certainly his doctrine. But, this is not our practice; for we feel it a duty to abridge pain, as well as to preserve life; and we have done this, we most conscientiously believe, in more than two

hundred instances; nor did gangrene, sloughing, or even a laceration of the perinæum follow in any one instance.

In Chap. IV., Mr. M. considers à l'Osborne, the comparative merit of the Cæsarean operation, and embryulcia. We shall not enter into any detail of strictures upon this disputed point; leaving every practitioner to consult more extended examinations of this subject elsewhere, and thus enable himself to make up his mind upon this debateable point of practice. We shall, therefore, only transcribe a portion of this chapter, that the reader may be put in possession of the logic, and ethics of Mr. M. upon this point.

“I am at a loss for the least excuse for the practitioner who would sacrifice the life of the mother, that the child may be saved. To say nothing of the great danger of sacrificing both by so rash a choice; for, I conceive, the most resolute of our profession, would hesitate long, before he made up his mind to so cruel an expedient, and this delay would *generally ensure the death of the child*. But, supposing the infant could be saved; on what plea could we put the life of the mother in comparison with that of the child. If, by a contrary practice we save one woman out of five, even to the destruction of five children, I conceive the advantage is still on this side. If the increase of mankind be the consideration, *the woman saved may afterwards have five children, and these have children as early, (within a few years,) as the infant, had it been saved.*”

We see by this quotation, or at least it appears so to us, that Mr. M. does not altogether relish the taking of the child's life by the downright violence that embryotomy imposes; to spare his sensibility he would “hesitate a long time before he made up his mind to so *cruel an operation*, and this delay would *generally ensure the death of the child.*” Wonderful tenderness. He would permit the poor infant to die by inches, that he need not destroy it suddenly, by a cruel operation. Upon this point we could say much; but we must proceed.

The logic, and political calculation of Mr. M. is not less remarkable; he is comparing the merits of two deadly operations. One highly threatening to the mother, but offering a probable, nay almost certain chance to the child. The other *certain death* to the child, but offering a chance to the mother. Yet he very gravely tells us, “the woman saved may afterwards have five children, and these have” (after having their skulls opened, and their brains let out by embryulcia,) “children as early” (within a few years,) “as the infant, had it,” (by the Cæsarean operation,) “been saved.” p. 22.

“The time was, when the brains were out, the man would die.”

The woman who has had embryulcia performed on her five times, we must presume, had it performed from an absolute necessity arising out of a defect in the pelvis; and that each time it was done, was because there was no other chance of relief, but by this operation or by the Cæsarean operation. Yet Mr. M. gravely tells us that this woman may bear five children more, and they raise a progeny! Can the performance of embryulcia *five times*, possess a charm to do away the defects of an ill formed pelvis? if it cannot, embryulcia must inevitably be performed five other times, if the woman again goes five times to the full period of utero-gestation; and if this be the case, the objects of political economy cannot be answered, by giving the preference to embryulcia, over the Cæsarean operation.

Nor can we allow the young practitioner to be imposed upon, by the specious pretext of a name of some celebrity, or by false calculations, when it will interfere with his duty, and influence his judgment, to the injury of society.

Mr. M. informs us that Dr. Osborne has declared, that "out of sixteen hundred cases, he has used instruments in three only, and in one of these he considers unnecessarily." p. 53. Now this is a strange quotation altogether; since it does not tell the result of all Dr. Osborne's practice; for it is not to be supposed, that a man so fully employed as Dr. O. is said to have been, can have witnessed but sixteen hundred cases of Midwifery; and if he has not given us the result of his whole practice, he has, of course, not given a proper average.

Besides, Dr. Osborne is no authority on the use of the forceps; not because he differs from every body else, as regards the proportion of cases that may require them, but because he makes the necessity for their employment consist in a moribund state of the patient. He requires, that, "the powers of life be exhausted; all capacity for farther exertion to be at an end; and that the mind must be as much depressed as the body; and would at length sink together under the influence of such continued but unavailing struggles, unless rescued from it by means of art." If these be Dr. O.'s rules, he may well have but few cases fit for the forceps; or rather he ought to have none, since art can interpose with but very little prospect of success, under such a burden of evils.

We consider the declaration of Dr. Davis, of London, of much higher authority than the joint opinion of our author and of Dr. Osborne together. He says, "in my own practice, as one of the physicians to the Maternity Charity of London, which is beyond comparison, the most extensive obstetric institution in Europe, I have the satisfaction

of being able to assert, that I have never incurred the misfortune of losing a mother in consequence of a forceps operation." Elem. Oper. Mid. p. 274. Here however we must stop; not because we have nothing more to say, but because our limits will not permit a farther elucidation of this important point.

In Chapter V. Mr. M. advocates an untenable ground; namely, that the symphises of the pelvis relax during labour, to favour the escape of the fœtus through this cavity. But as this opinion however unfounded or ill-supported, leads to no great practical error, we will consign the hypothesis to the tomb of all the Capulets. Remarking only, that we do not doubt, but that a relaxation of the pelvic symphises, does occasionally take place; but when it does, it must be regarded as a diseased condition of these parts.

Though we have agreed to dismiss the ostensible subject of this chapter, we cannot pass without remark, the preposterous and dangerous practice of Mr. M., in lingering cases. He says, "when administered, (spirits,) in a large quantity of water as a *diluent*, so as to take off the sickening effect of the warm water, I think it it often of the greatest advantage, causing an increase of the circulating fluids, which cannot be carried off by the kidneys, as they very seldom secrete at all, or in very small quantities during labour, the increase must then be thrown upon the uterus, and excite it to action. It was indeed, the best means we were possessed of to accelerate lingering labours, before we were acquainted with the ergot." p. 45.

The practice of midwifery must have been in a lamentable state, in Mr. M.'s neighbourhood, (for we cannot suppose he means to include a wider range,) if rum and water was the best means in their possession, "to accelerate lingering labour." The causes of lingering labour are various, agreeably to Mr. M.'s own showing, and as we shall see presently, yet, for all these varieties, but one remedy was known; namely, diluted ardent spirits. Has Mr. M. never known fever to attend a lingering labour? has he never witnessed too much blood to be the cause? has he failed to observe how frequently an engorged state of the uterus has occasioned a lingering labour, and how suddenly this has been relieved by the loss of blood? Can it be supposed then, that an increased quantity of this fluid, thrown upon the uterus will be favourable to its action, when it possesses already, as much, or, perhaps, more than it should, to enable it to perform its actions healthily?

Besides, he tells us, p. 50, "that hectic or phthisical patients are said to have long, lingering labours, *but I have never found this to be the case.* I have met with several cases in which consumption has been

delayed by utero-gestation, although the patient was within a few weeks of death, at the time she first proved to have a fœtus in utero. In these, the os uteri gave very little resistance to the child, the perinæum was thin, and the child born in half the time, and with less pain, than any former accouchement." p. 50. In these cases, (which are in strict conformity with our own observations,) Mr. M. would find it difficult to prove the presence of an increased quantity of blood in the uterus, which he thinks so essential to its action.

In Chap. VI., Mr. M. considers "the various causes of lingering labour, and its treatment." This chapter commences with the following observations. "A great variety of difficult or laborious cases, which require instrumental aid, are enumerated by authors; these I shall endeavour to review, as briefly as possible, and will show, that most of them may be overcome by skilful management, when the presentation is proper, without even the assistance of the hand."

In these promises, he entirely fails, in our opinion; at least, if indiscriminately recommending of dangerous practices may be considered as failure.

"1st. Labour-pains protracted or delayed by debility." p. 48.

This is the first assigned cause of lingering labour, of our author; for the management of which, he says, "in cases of debility, as described by authors, arising from disease, or flooding, which is always alarming to the timid and unpractised accoucheur, if the bursting of the membranes do (does) not produce expulsive pains, I would not even wait for medicines to take effect, either to stop the hæmorrhage, or increase the throes, but at once introduce the hand, turn the child, and bring it away, as the only safe treatment both to the mother and the child."

If there ever was a more vague, and dangerous direction given to the young practitioner, it has not met our eyes. It is contrary to every well-established principle in midwifery, and contrary to the opinions of the most enlightened practitioners of the present day. It directs, that, whenever the female becomes weakened by disease, or flooding, that the membranes should be immediately ruptured, with a view to stop the bleeding. Here, no mention is made of the condition of the os uteri, whether its condition be fit for this purpose or not. For it is now, an established law with the best authorities upon this subject, that rupturing of the membranes should not be had recourse to, but as a dernier resort, unless, the danger be imminent; the os uteri dilated, or easily dilatable; and, other means have proved unavailing. No provision is made against the contingency, that the os uteri may be rigid; by directing in this case all the remedies gene-

rally employed for flooding, and especially, by that almost certain one, the introduction of the tampon.

The uterus is not even to be induced to contract, by giving the ergot previously to an attempt to turn; for if the breaking of the membranes do not immediately "produce expulsive pains," (a circumstance we have never known to happen in this state of things,) he would, "at once," and we must presume, at all events, "introduce the hand, turn the child, and bring it away." He in this case, advises the introduction of the hand at all events; for no exception is made; the os uteri is to be penetrated, at whatever cost; and the uterus is to be suddenly emptied, however indisposed it may be to act, at the almost certain risk of increasing the disease, for which this hasty turning was intended to prevent. Let any experienced practitioner say, whether this is safe advice for the young practitioner. If there be any two rules more imperative than the two here directed to be violated unnecessarily, we are unacquainted with them. For, it is a fundamental principle, in obstetrical practice, that nothing can justify the entering the uterus with the hand, when the os uteri is rigid, resisting, and requiring force for this purpose. It is also agreeable to all sound experience, that the uterus is not to be suddenly emptied at any time; but especially, when it is indisposed to action, as it almost always is, when the system in general is weakened by the loss of blood.

"2dly, Epilepsy. Here I would pursue the same course, and turn." The same objections would apply to this practice.

"3dly, Irregular pains and spasms." Here purging and large doses of opium are recommended.

"4thly, Debility and faintness, not to be referred to any particular cause, will occasion protracted labour." He does not tell us how to manage this case, nor does he attempt to show that such a condition of the system may exist. This is a great omission after the high promise made in the initial paragraph of this chapter, that he would show, "that most of the causes of lingering labour might be overcome by skilful management." Now we do not believe that this state of "debility and faintness" can exist without a particular cause; and are of opinion that this condition has several, and sometimes opposite causes; and that they may require prompt and opposite treatment.

Among these causes we may reckon an over-distension of the uterus from too large a quantity of the waters; a plethoric condition of the system in general, or the uterus in particular; a too dense and unyielding condition of the membranes; an internal hæmorrhage, &c.

"5thly, Inflammatory habit in the strong and robust, causing a

determination of blood to a different part." Here he properly directs bleeding, purging, and a cooling diet.

"6thly. The practitioner may be deceived by spasms and pains in the bowels, before labour-pains come on." For the relief of this condition, he advises "glysters, castor-oil, and opiates." Here the young practitioner, after having consulted Mr. M.'s book, might ask what kind of glysters, when should castor oil be exhibited, and when opiates. All these may be highly proper in appropriate cases, but these cases are not pointed out.

"7thly, Passions of the mind, and mismanagement of the labour, will frequently delay the pain several days." For these he offers no remedies, but most unsuccessfully speculates upon the *modus operandi* of "passions of the mind." How to remedy the consequences of mismanagement, he does not tell us.

"8thly. Cases of rigidity of the os uteri, constriction, firmness of the ligamentous part of the pelvis, and also from *flaccidity* of the os uteri, which is worse than *rigidity*."

To prove the latter assertion, a circumstance unheard of before, that a flaccid condition of the os uteri is worse than a rigid condition, he relates a case of rigidity that was overcome spontaneously by rest in three days. Does this prove, that the same would not happen to the os uteri when it was in a state of flaccidity? He ends this summary by the following reflections.

"Such are the cases, which, in one out of ten, are said to require instrumental aid." Where has Mr. M. found this doctrine inculcated? We know of no such assertions or calculations. There is not a case here enumerated, that would require, in any thing like the proportion set down, the aid of instruments. Indeed, one or other of these causes, is of every day occurrence, yet how few employ instruments for their relief.

He says, "I entirely agree with Dr. Osborne, that in these cases we ought to have nothing to do with mechanical art." We have already remarked upon these opinions, and shall not repeat them here. He then adds, "patience and medical treatment will overcome them all; even the worst of them require *nothing more than turning*."

Nothing more than turning!! Mr. M. speaks of this operation as if it cost neither condition, skill, nor period for its performance; and as if it were of such easy accomplishment and so free from all evil consequences, that the merest tyro in medicine might undertake it with the most entire prospect of success; not so thought Bandelocque, and many others of good authority.

By men of large experience, turning has ever been considered an

operation both of difficulty and of danger. An operation requiring the rules which should govern it to be more exactly obeyed, than almost any other connected with midwifery. It should always be looked upon as a *dernier resource*, where necessity imposes its performance; for it is confessedly an operation of frequent danger to the mother; and is very often fatal to the child. But at the same time we agree that it is of vastly easier accomplishment, than a well performed operation by the forceps, when the head does not occupy the vagina.

We also agree, that little more than a persevering hardihood is required to effect *the mere turning of a child in utero*; hence, the cause of a preference being given to it; and especially by those who are not adroit in the management of the forceps. But to turn in a manner that shall be free from all danger to the mother, and with safety to the child, requires an entire knowledge of the principles which should govern the operation; and which too few possess. We have no hesitation therefore to declare, that however mischievously the forceps may have been employed, that the evils from this source are fewer than those which have arisen from attempts to turn.

Nor need this surprise us, when a writer at this day shall advance an opinion that is, and must ever be at variance, with all reason, and with all experience. Mr. M. p. 56, says, “in twenty years I shall not be surprised if the forceps be known only by name, as in cases in which ergot cannot be administered, *turning is all that is required; this may be effected as easily when the child’s head is in the perinæum, as at any other period, and can be done with as much safety as in any earlier stage.*” This doctrine is so monstrous, and so contrary to common sense, that we will not insult the acquirements and good sense of our readers, by offering a single comment.

In Chapter VII. Mr. M. treats of the “great advantages of the ergot of rye—its general introduction will supersede the use of the forceps,” &c. He introduces the first part of his subject, by some well merited praise of the power of the ergot; to all of which we cheerfully subscribe; but when he declares that this substance will entirely supersede the necessity of the forceps, we cannot agree with him—and for this plain and honest practical fact; that we have been obliged to have recourse to these instruments as observed above, after the fairest trials had been made of the ergot.

That the ergot has, and will continue to diminish the frequency of instrumental deliveries, we are every way willing to admit, and this is the whole, nor is it a small acknowledgment, that we can admit; for cases will continue to occur in every man’s practice of any extent, that can only be terminated by the forceps with entire safety

to the child. And we must here inculcate that the life of the child must always be considered of high importance; and when that of the mother is in no jeopardy, that it alone, merits attention. If this principle be correct, it is worthy of being acted upon; and if acted upon, the forceps must be put into occasional requisition. For so long as women are liable to resisting soft parts; to exhaustion of uterine force; to comparative or absolute narrowness, the forceps must be employed; for we again repeat that a sufficiently ample experience has satisfactorily proved this to us.

But this is not the only extravagance that Mr. M.'s enthusiasm has led him into—for he indulges in the Eutopian opinion, “that as soon as it, (the ergot,) is generally known in female practice, it will supersede the necessity for male practitioners; except in a very few instances, where *disproportion of parts is very great, or the presentation such that delivery cannot be effected without turning*; in such cases the medical man will still be called in.” And if the business of midwifery be taken out of the hands of the male practitioner, where will a “medical man” be found, competent to the end proposed by Mr. M.? for it would be vain to deny that skill is required upon such occasions if any value be set upon the lives of mother and child; and it will not be denied, that to acquire skill, practice is a sine qua non.

Besides, in this desire, for we will not admit it to be an expectation, Mr. M. is inconsistent with himself; for in his preface, he says, “no one modern improvement in medical science has, in my opinion conferred so great a benefit on society in general, as the superior skill, information and talent, at present directed to the science of midwifery. The death of a female in child-bed is now comparatively rare among practitioners in the country; and from the various methods adopted for the acceleration of the birth, (of which none can compare with ergot of rye,) *the proportion of still-born children has been very greatly diminished*. A science, so manifestly conducive to the preservation of life, and on the skilful management of which the existence of numerous individuals so peculiarly depends, may readily be admitted to be of the highest importance.” p. iv.

The advantages of the male, over the female practitioner, is here set forth in good round (and as we think,) honest terms; and these facts lead him to the following conclusions. “I believe, I advance the opinion of most of my brethren, when I say, that the medical practitioner in the country, would most gladly resign the midwifery practice to the females, as in former days, but, at the same time, *I am convinced, that the present state of information on the subject, such*

resignation would be attended with a great annual sacrifice of valuable lives." p. 5.

In proof of the sincerity, and justness of his opinions on this subject, he states, that, "of twenty-one deaths that have occurred in this neighbourhood, within the last twelve years, nineteen have been women attended by females only." p. 6. Again, Mr. M. is inconsistent with himself, for, in p. 69, he says, "it, (the ergot,) does not, however, appear to have been employed by medical men at that period, and in the hands of the females it was observed to produce harm." Yet, he wishes the practice of midwifery to revert into the hands of females, with all those facts before him.

Chap. X., is "an examination of the objections brought against the use of the ergot of rye, by Dr. Hall," &c.

In this chapter, Mr. M. has, we think, very successfully established the innocuous qualities of the ergot; but, has failed to prove that it has the smallest agency in dilating the os uteri, in the relation of his cases. We may remark here, en passant, upon his injurious practice of giving ardent spirits to his patients, after delivery, by saying, it can do no possible good, and may be productive of great harm. His sixth case appears to us, to prove nothing, except improper interference; for the pains were frequent, by his own confession,—"this woman, when I arrived, had one pain only, in about three minutes and an half on the average; after the ergot began to have effect, the pains were incessant, and in three minutes and an half, she must have had thirty pains, and this caused a saving, of at least, thirty hours."

This is, truly, no less a strange, than a false calculation; in this country, we would very rarely wish the pains to be repeated oftener than once, in three or four minutes; and experience has taught us, that it is the degree of force exerted by the uterus, that is, the efficient cause of delivery, and not the frequency of its contraction. For, every practitioner must have observed a greater degree of advancement effected by a single pain in some instances, than by thirty, in others. In our opinion, one of the greatest objections to the ergot, sometimes is, that it accelerates the contractions, without augmenting their force.

Case 7th, Was a case of twins; the first child was still-born; ergot had been administered "by way of experiment," but it failed to enable the uterus to relieve itself. After it was ascertained that there was another child, the ergot was again given, and this child was born alive, and healthy; it is, therefore, evident, that the first child did not die from the effects of the ergot.

Case 9th, Purports to illustrate the agency of the ergot, in dilating

the os uteri, though eight hours and an half were employed for this purpose. Now this effect, in ordinary cases, takes place long before this time, without the agency of this medicine.

Case 10th, Clearly demonstrates the exciting powers of the ergot, but not its dilating powers; for the uterus was open some width before it was given, and was most probably dilatable at that moment; and when in this condition, its expansion is often but the work of a few minutes, even when no ergot has been used. We say "probably dilatable;" for had it been rigid, it would most probably have been recorded by Mr. M., as it would make so much for his theory.

Case 11th, Also shows very satisfactorily, the powers of the ergot upon the uterine fibre, but not upon the mouth of the uterus.

Case 12th, Proves three things; first, bad practice; consisting in giving brandy and water; making the woman walk about the room; and waiting five hours before he relieved the uterus, when from all we can collect, it was as proper to do so half an hour after he found the ergot had failed, as at the moment he performed the operation.

Secondly, it proves that the ergot will fail occasionally, to excite uterine action, in cases that appear most appropriate for its action.

Thirdly, it proves a very valuable fact, that pustules may infest a child in utero, where no ergot has been administered. For the first child was born before the ergot was given, and "it was covered all over with pustules about the size of a silver penny, or rather bladders, as if scalded, with a purple state of the skin, the legs nearly black." The second child had nearly the same appearance; it was strong, and lived four days.

Case 13th, shows that ergot cannot succeed, where the pelvis is much contracted, and it should never be given in such cases. It also shows that even embryulcia is attended with great difficulty and danger during the operation; and that it may be followed by serious consequences, though the woman may partially recover.

Case 14th, shows a wanton use of instrument.

Case 16th, proves that the ergot, when given in cases of rigidity, may occasion, as we all believe in this country that it will do, a great deal of unnecessary and unavailing pain. The child "was not delivered for more than three hours after the exhibition of the ergot; and it had "brought on such constant pains, that for more than two hours there was little or no intermission; it was indeed so great as to bring down the strength and exhaust even more than bleeding could have done." This case would have been treated by liberal bleeding in this country.

Case 17th, shows that in a preternatural presentation, when every

other circumstance is promising, the ergot may be given. This was a breech presentation, and would be ranked by Baudelocque with the natural labours; we would of course not give ergot in cases where the child was to be turned, though this practice is warmly recommended by Mr. M.

The other cases given by our author, do not appear to require remark. In conclusion, we must say, that in so many pages, we have never known so many contradictory opinions; so many dangerous practical precepts; and such unreasonable and inveterate dislike to the forceps. And that Mr. M. has not in one single instance proved what he so confidently purported to prove; namely, that the ergot was an efficient means to dilate the os uteri when rigid. And that he has not added one tittle to our knowledge of this substance, if we except the suggestion at p. 126, that milk, as a vehicle for the ergot, may render its operation more mild.

Of the second work at the head of our last remarks, we shall have little to say; it being confessedly a translation and abridgement of Dr. VILLENEUVE'S work upon the subject of the ergot, and contains but little that is absolutely new.

In investigating his subject, the author takes occasion to remark, "that amongst all the different accidents caused by the spurred rye, there is no mention made in a positive and formal way, of any instance of abortion or premature birth of any infant, dead or alive," p. 16. This is certainly contrary to the common opinion entertained of this substance in this country. A number of experiments we know were instituted with a view to determine this question; and our impression is, that it was ascertained that the ergot had upon some of the inferior animals, the power of producing abortion.

We can offer nothing *positive* ourselves upon this point; yet a case of abortion which fell under our notice led us to the belief that it was produced by the ergot. A female was taken in violent pain, attended by hæmorrhage, in the house of her sister. Her husband had been absent a long time, and she became pregnant by an illicit connexion. Wishing to conceal her guilt, she applied to a physician, who gave her some powders which he said would effect abortion. After she had taken several portions, she found herself in the situation just mentioned. As we were in attendance at her sister's, we were sent for, and we found this patient in very violent and almost constant pain, with a considerable flooding, which soon after terminated by the expulsion of twins at about the fifth month. During a temporary absence of her sister, she communicated her situation to us, and said there was a powder left, similar to those she had taken. We examin-

ed it; it proved to be about a drachm of powdered ergot. We admit that this is not a positive instance of the power of this drug to produce abortion; it may have been mere coincidence.

Our author states upon the authority of BURGHARDT, that "convulsive ergotisme," does not put a stop to the menstrual flux, p. 18. He traces the use of the ergot in labour, much earlier than we had thought it was known. He states that R. I. CAMARERIUS says that the women in certain parts of Germany, as early as 1688, used this substance to accelerate parturition, p. 20.

The author prefers artificial delivery, to the use of the ergot, when the lower extremities are presenting, and the parts sufficiently dilated, p. 29. He also appears to be of opinion, that "in this state of things, where blood-letting and the other means of depletion are indicated, the ergot, so far from proving useful, might be very prejudicial, by *increasing* the rigidity of the os uteri and muscular fibres, more especially if its use should be persevered in, and the subsequent doses augmented on finding the first ineffectual," p. 31.

The following observations merit some attention. "It will be prudent not to give the ergot to females, who, in their former lyings-in, have been attacked with metritis or peritonitis, for fear of any return or relapse of these attacks; though, if we may trust to M. BILLARD's report, he has seen this remedy given without the least inconvenience or bad consequences to women in labour, even when peritonitis was a prevalent complaint among females in child-bed," p. 36. The late Dr. HOLCOMBE was of opinion that the ergot prevented puerperal fever.

He says that DESGRANGES "gave the black external part only, in doses of four or six grains, without any of the inner substance, and that these small doses proved equal in effect to half a drachm of the entire grains," p. 42.

He states that the ergot has been used with more or less advantage in the following diseases:—1st. As favouring the expulsion of the placenta; 2dly, as accelerating in cases of abortion, the expulsion of the whole, or the remnant of the ovum; 3dly, as restraining uterine hæmorrhages; 4thly, as producing the expulsion of clots from the womb; and 5thly, as being the means of moderating the lochial discharge," p. 79.

This little work is concluded by a valuable table from which it appears, says, our author—

"That out of seven hundred and twenty cases wherein the spurred rye has been administered, within our knowledge, during parturition, there have been—

"In the first place, Six hundred cases of complete success; that is, where the

fœtus has been entirely expelled living or dead, at the full term or otherwise; either twin cases or single; circumstances which we have not been able to specify in our table.

"Secondly, Five successful cases of the delivery of the placenta or secundines.

"Thirdly, Five successful in cases attended with uterine flooding after delivery.

"Fourthly, Sixteen of moderately successful, which are made up of certain cases where the ergot has only excited for a certain time the expulsive pains; the deliverance being only accomplished naturally several hours after its employment: and secondly, of cases where, after having advanced the labour to that point where the application of instruments became admissible, it was at length accomplished by those means.

"Fifthly. Eighty-two instances of complete failure, or cases wherein the ergot produced no evident effect; that is to say, induced no return of the uterine contractions, whatever might have been the doses in which it was given.

"Sixthly, Twelve unfavourable or fatal results, either in respect to the mother or the child; attributed by the several authors to its immediate action, or to some secondary effect of the ergot; and of the futility of which we have already given our opinion.

"So that upon the whole it results, that out of seven hundred and twenty instances wherein the spurred rye has been employed, there have been six hundred and ten completely successful, not comprising those of moderate success, which we omitted; so that the chances of success are to the chances of failure in the proportion at least of seven and a half to one. Now then, as a similar result is but rarely furnished by any other of the therapeutic agents employed in cases of parturition, we may therefore conclude, that no other remedy can be compared with it, either as to its utility or efficacy in bringing on safe delivery.

"Lastly, as to the proportions between the number of times that the spurred rye has been employed, and the fatal cases which are *attributed* to its use, (results which would give only one unlucky case in sixty,) this calculation is reduced absolutely to almost zero, considering all that has been already advanced in its favour.

W. P. D.

BIBLIOGRAPHICAL NOTICES.

1. *Journal der Chirurgie und Augenheilkunde.* Herausgegeben von C. F. von GRAEFE, M. D. &c. und PH. von WALTHER, M. D. &c. 11ter. band, 4 Stücken: 12ter. band, Stück 1. Berlin, 1828.

The Journal of Surgery and Ophthalmology, conducted by Graefe and Walther, has long maintained a distinguished character, and largely contributed to the diffusion of medical knowledge. It is published quarterly, in numbers of from 160 to 170 pages each, is devoted to original communications, reviews, and bibliographical notices, and is particularly remarkable for the value of the original essays which it contains. As few of our readers have access to the original, we believe it will prove an acceptable service to present an analytic notice of the numbers recently received and to make occasional extracts from the most interesting articles.

The first papers on pseudomorphosis, or morbid changes of structure from excessive or defective nutrition, is by Professor Ritgen.* Its great length, being extended to upwards of two hundred pages, will prevent us from stating more than its general character at this time. The writer has drawn up a digested systematic view of the actual state of knowledge upon the above-mentioned subject, and his task is accomplished in a masterly manner. His divisions are made with scientific precision, and his inferences from facts, deduced according to the best rules of philosophizing. He gives minutely detailed accounts of the specific appearances, and conditions indicating and accompanying morbid changes of structure in all parts of the body, in a strongly distinctive and clearly expressed style, which is especially advantageous to the reader.

The second article is an account of the state of surgery among the Siberian and Asiatic nomadic tribes of Russia,† and contains a considerable number of curious and interesting particulars. The following extracts will show that the writer has strictly adhered to truth, in saying that “highly elevated as is the condition of surgery in Europe, it is still entirely in its infancy among the nomadic tribes of the empire, as well as the Russians in the remote regions of this gigantic realm, upon which the sun scarcely ever sets.”‡

“*Blood-letting.*—The operation of blood-letting holds a most distinguished place in surgical practice, and to say nothing of its fabulous discovery, was performed 1180 years anterior to the Christian Era by Podalirius, on the Carian princess *Syrna*, who rewarded him with her hand for his successful cure. The

* Ueber Afterbildungen, Von Herrn Regierungsrath und Professor Dr. Ritgen zu Giessen.

† Ueber den Zustand der Wundarzneikunst bei den Sibirischen und Asiatischen nomaden Voelkern, Russlands, Von Herrn Dr. Heinrich Martius, &c.

‡ “When it is noonday at St. Petersburg, it is thirty-nine minutes, forty-six seconds past ten o’clock at night at Tchukoskoi Noss, which distance makes a difference of longitude of eleven hours, seventeen minutes, three seconds. Awatscha, or the Harbour of St. Peter and St. Paul, is also about two thousand German miles, (equal to ten thousand English,) from St. Petersburg. The swift Russian post is more than two months in going the route.”

northern disciples of Chiron perform the operation on man and beast with the same instruments. As in the smaller villages, where there is neither smith nor other artizan, the Russian peasant of the distant regions we treat of, buys at the basar the materials for his wagon, wheels, and other implements of husbandry, and makes his own doors, windows, locks, &c. of wood, using little or no iron; the blacksmith of the larger parishes is the surgeon, dentist, oculist, and instrument maker, all in one. From his store of iron weapons, the medicaster selects such as he deems appropriate for each particular case. The operations of these rustic practitioners is chiefly confined to bleeding, cupping, cauterizing, and sweating, and in these practices, closely resemble their European professional brethren. If the first bleeding does not afford relief, it is repeated, in some cases as often as ten or more times, just as some of our bleeders do, until the patient is well or dead.

"Some of these Asclepiades are in possession of an old blunt lancet, scalpel, bistoury, or dissecting knife, which all-powerful chance has thrown into their hands. That these instruments are in an entirely singular condition, blunted and misshapen from long years of service, one may readily conceive. Frequently, however, a strong, double-edged, steel needle, and sometimes a triangular pointed knife are used.

"Among the Kalmucks, the surgeons use a sort of fleam called *chanòr*. The operation is also performed with a blade fastened to a handle. This is placed over a vein, made to project by a tight ligature, and struck with a small iron hammer. When the operation does not succeed, which is not uncommon, it is repeated until the vessel is fairly opened, and the blood flows."

Among the Asiatic tribes we also find an entirely original instrument for blood-letting; it consists of a sort of small cross-bow, the bow being of ivory, which the surgeon tightens or relaxes, according to the force required. Instead of an arrow, a lancet-shaped instrument is placed upon it, and upon pulling the trigger, is shot into the vessel.

"The most simple and shortest method is used by the Kamtschatkades. They select for the operation either side of the ankle-joint. The patient places the naked foot on the lap of an assistant; the operator then, with a pair of small wooden tongs, or two slender pieces of wood, takes hold of the skin over the spot where the vessel is visible, so as to form a fold, (somewhat as is done in the operation for hernia,) and then bores into the vessel with a pointed, polished little knife, or for want of this, with a punch, awl, or packing-needle, or some other sharp cutting instrument of iron or copper, or sometimes with the sharp corner of a flint or piece of agate, until a sufficient quantity of blood is obtained.

"*Leeches*.—The medicinal use of leeches is not unknown either to the Russians, Tartars, Armenians, or other similar tribes. These little vampyres are

* A much more dangerous operation than this is performed by sailors occasionally. A thick glass bottle is broken with a hammer or marling-spike, and the keenest edged small conical fragment is selected, which is fastened to one end of a small piece of stick. The operation is otherwise exactly like the above, only the blow to cause the section of the vessel is given with a small stick. It is said to be not more painful than bleeding with an ordinary spring lancet, but from the brittleness of the glass edge, must be a dangerous instrument. The commander of a brig in which the writer came from the West Indies last spring, informed him that his mate had bled three of the crew in this manner, on the voyage out, with great advantage.

employed by such persons as cannot bear the sight of blood, or as have been inspired with a very reasonable dread of blood-letting by the barbarous processes of their rustic surgeons."

The method adopted by these people to collect the leeches is quite original; the leech-catcher strips and plunges into the brook or pond where leeches are abundant, and remains for a certain time, during which they attach themselves in great numbers to his skin. On coming out of the water, a small quantity of table salt is applied to each leech, which causes it immediately to let go, and the whole are kept in a vessel of water for future use. The mode in which leeches are preserved during the winter appears to us to be exceedingly worthy of imitation, as we frequently hear complaints of the difficulty of keeping them during the cold season, which if the statement relative to these Russian tribes be correct, this method would entirely obviate. In the month of October, a pit is dug in marl or clay in the open air, and the sides and bottom made quite tight and smooth; this is filled with fresh river water, the leeches are placed therein, and the whole allowed to freeze solidly. Whenever the leeches are wanted for use, a piece of ice containing them is chopped out of the pit, and is allowed to thaw gradually in a cool place. Leeches preserved in this manner through the winter, appear to be much better, and to bite with greater greediness than such as have been kept in a room.

Scarification and acupuncture are among the most common remedies of the Asiatic tribes inhabiting the Russian steppes, as well as among the neighbouring Siberians. The surgeons of these tribes go round their districts regularly twice a year, in the spring and harvest, to perform these operations. In colics and other affections of the bowels they make hundreds of punctures into the abdomen, with silver or copper needles, with a view of allowing the offending gases to escape. In phlegmon and other circumscribed swellings, they puncture until a considerable quantity of blood is discharged. In other boils and swellings, powdered sublimate, arsenic, or alum are applied after the matter is discharged, or the surface is dressed with chewed Circassian tobacco. Scarifications about the uvula and fauces, or under the sides of the tongue, are freely resorted to in cases of quinsey, dyspnœa, and other inflammatory affections. In high degrees of inflammation of the eyes, the lids are scarified with a small knife. To diseases of the eyes, the inhabitants of the Great Steppes, or desert plains, are especially liable, from the intense light reflected from the surface, as well as the fine dust blown about by the winds. As a protection against these evils, some of them wear a sort of shade made of a strip of green or black gauze, or a sort of net-work made of sable's hair.

Inoculation for the small-pox is perfectly well known to these tribes, and most probably the knowledge of its advantages is derived by them from their neighbours, the Chinese. Every ten, twenty, or thirty years the small-pox rages among them with most destructive violence, sweeping off all the unprotected.

"The mode in which the Mongol practitioners inoculate for the small-pox is very simple. They steal or purchase some dry scabs which have fallen off spontaneously, and make a small wound in the skin, or a part of the hand or foot, or some other part of the body, and secure the small-pox scab by a fillet, over the fresh wound. This is retained until the virus has acted, other pustules are formed, or an access of fever comes on, and is then removed.

"In Grusia and Georgia, the inoculator makes a superficial crucial incision between the thumb and forefinger, about half an inch long. With the point of a knife, he then mixes, in a little box, the small-pox matter with blood from the wound, which he wipes up with a small wisp of cotton, and then repeatedly applies the infected knife to the wound. The cotton is then placed over the wound, which it irritates continually, being retained by a slight bandage."

Cupping is performed variously among different tribes. Some exhaust the cup, which is large and made of copper, over a hot fire; others make use of horns having a small hole at the superior extremity, through which the operator exhausts the air by suction, and secures this opening, when sufficient exhaustion is produced, by holding a finger over it, or by applying some sort of plug. Cupping is performed in precisely the same manner by many of the negroes in this country, except that they use the ends of conical gourds for cups. The actual cautery is used extensively among some of these tribes, as is the application of moxa. In cases of inflammation and irritation from spider or scorpion bites, the wound is scarified, cauterized with a hot iron, and washed with oil or butter milk in which a spider has been crushed. Should this treatment be inefficient, the patient is placed on his back, and made to drink as much sweet milk as he can get down. He is then stowed in a chest or basket, which is suspended by two ropes to a strong hook, and swung by assistants for four or five hours, or the basket is turned circularly until the ropes are closely twisted, and then allowed to unwind rapidly; both these modes produce faintness and nausea followed by vomiting and sweating, which completes the cure.

The third paper is an account of the extirpation of a parotid gland by Dr. Cordes of Hirschberg. The gland was in a schirrous state, enlarged and studded over with callous protuberances of the size of a pea. It was successfully dissected out with the loss of from two to three ounces of blood, and the bleeding was so unimportant that it was not necessary to apply a ligature. The whole gland was removed, and weighed one ounce, nine grains, being of a callous hardness throughout. When the last incision was made, the patient started up from the seat and exclaimed loudly; saying afterwards that he then felt as if an electric shock had struck through that part of his head. His face on the side operated upon was paralysed to a considerable degree, and remained so after he was restored to health. Dr. Cordes makes some remarks on this paralysis, and on the starting of his patient at the conclusion of his operation, yet never once alludes to the immediate cause of it, the division of the trunk of the portio dura of the seventh pair; and to judge from his paper, he is perfectly unacquainted with the admirable researches of Charles Bell relative to this nerve.

The same practitioner gives an account of a case of abdominal dropsy, resulting from protracted organic disease, in which the patient, a female forty years old, was tapped, between the 24th of March of one year, and the 20th of September of the year following, *fifty-nine times*, and *five hundred and sixty-nine quarts* of water were drawn off.

We next find an account of ulcerations of the intestinal canal in nervous fevers, extracted from the official report of Dr. Wasserfuhr, a staff military surgeon. In nine cases out of ten, patients dead of this disease were found to have ulcerations in the jejunum as far down as the cæcum. The reporter states that

the disease was not properly a nervous fever, as the nervous symptoms only occurred towards the conclusion, and what appears to us still more remarkable is his statement that there was no evidence of enteritic disease or gastric fever during the illness.* We can readily admit that the patients may not have shown obvious indications of acute gastritis or enteritis, but it is next to impossible, if not entirely so, that such morbid actions should be going on in the intestinal mucous membrane, without affording evidence of its existence by the derangements of function produced. The so called "nervous symptoms" must have been preceded by others, equally the product of this very inflammatory affection which strongly resembles the dothinerteritis of recent French writers. On dissection the blood-vessels of the intestines were found to be in a congested state, and pustules and ulcerations occupied the jejunum, especially in the vicinity of the cæcum. These varied from the size of a pea to that of a shilling; they never perforated the bowel, but were situated in the mucous membrane; their edges were rounded, and examined against the light, numerous red vessels were seen running towards the ulceration, gradually thickening the part. The pustules were most numerous in the neighbourhood of the colon, and consisted of spongy, thickened, insulated portions of mucous membrane, which in their most advanced stage formed the ulcers.

The ensuing paper is a very interesting account of a case in which a large portion of the calf of the leg was torn off, and reunion was afterwards perfectly obtained. It occurred in the practice of Dr. Gröschner of Spremberg. A labourer was engaged with a companion in carrying timbers for a building. While he was engaged in moving a beam, carrying one end of it, having both hands behind him, and sustaining the load about as high as his loins, another piece of timber fell across that they were carrying, and struck the end violently from his grasp. The sharp corner of the beam struck him about a hand's breadth below the bend of the knee, and tore down the integument and the gastrocnemius internus muscle, nearly to the tendo-achillis. The breadth of the flap above was upwards of three inches, below it was held to the limb by scarcely a finger's breadth of integument alone. The persons who conveyed the man to his house had re-applied the flap of flesh, but to check the bleeding had washed the limb with brandy, and wrapped it in cloths wet with the same. Dr. Gröschner removed these and applied adhesive straps. The patient did well for a few days, but soon fell very low, and at length had regular hectic and night sweats. Finding little prospect of adhesion, Dr. G. made use of sutures and a wash to stimulate the integument to a higher degree of action, administering to the patient at the same time Peruvian bark in considerable quantity, and a nutritious diet. To his great satisfaction adhesive inflammation took place, and the whole mass became firmly united. If the violence of the shock to the limb be recollected, and the fact that the mass of the gastrocnemius detached was to derive its circulation, exclusively, through little more than half an inch of integument at the inferior part of a lower extremity, we may regard this cure as a triumph of considerable magnitude. The patient was able to resume his business on the twenty-ninth day after the accident, notwithstanding all the fluctuations of health he had undergone in that time.

* "Symptome einer Unterleibsentzündung zeigten sich nicht, obwohl eine Krankheit des Unterleibes, eine Febris gastrica nicht zu ver erkennen war."

Dr. F. A. Von Ammon, surgeon to the Dresden Institution for the Blind, next makes some observations upon congenital central cataract, which are of considerable practical interest. We have not room to give more than the following extracts.

“The central cataract, as a congenital morbid condition of the human eye, consists of a white, sharply, circumscribed, central cloudiness of the anterior capsule of the lens, which once formed, does not increase nor diminish, and is not to be confounded with the occasional opacity of the middle of the lens or its capsule. In the latter the limits of the commencing cataract are never precisely marked, while on the other hand the transparency of the capsule in congenital central cataract begins immediately along side of the white central spot. I have twice had an opportunity of dissecting the eyes of a fœtus having the central cataract; each time I found it to be a white central spot on the anterior surface of the capsule of the lens: but neither with the naked eye, nor with the aid of the microscope could any elevation be discovered; the central cataract appeared to me like leucoma of the cornea; difference of density was the only perceptible difference between the morbid spot in the centre and the clear part of the capsule. Both eyes were from children born about fourteen days before their time; one of them lived for some hours after birth, the other was still-born. In neither was there any trace of the *membrana pupillaris*; the crystalline lens was transparent opposite to it, but of a reddish colour, which commonly occurs at this time.”

Dr. Von Ammon considers this congenital cataract as very inexplicable, and attempts to account for its occurrence by supposing that a partial adhesion may take place between the surface of the pupillary membrane and the anterior face of the capsule, which remains when the membrane in the latter months of utero-gestation is gradually removed. Still he regards this as a mere hypothesis, since in all the investigations in which he has most carefully examined the *membrana pupillaris*, he never has found one in which the centre was not already perforated. We are obliged to pass over many interesting observations connected with this subject, and content ourselves with stating Dr. Von Ammon's reasons for objecting to any operation upon this congenital cataract. This is of more importance, as it is in direct opposition to the advice of Dupuytren, who has recommended the same treatment in this disease as when the whole crystalline capsule is opaque. The reasons given by the German surgeon appear to us perfectly satisfactory, among which are the following. The congenital central cataract does not entirely prevent vision, but partially obstructs it; the patient is not blind, but short-sighted. In time he becomes accustomed to a more acute examination of objects, and for near ones gains a tolerably good sight, so that at length the central cloudiness is not regarded. As no one can answer for the success of an operation, under such circumstances it should not be done. In case the surgeon determines, notwithstanding the contraindications, to perform the operation, the question still remains, whether the eye, long accustomed to the peculiar rolling on its axis which accompanies this affection, will be brought to relinquish this habit? If the answer be in the negative, then not only will nothing be gained, but with the partially obscured anterior portion of the capsule, the sound lens will be removed or thrown out of its natural position, &c.

The succeeding article is upon the subject of chronic *Uveitis*, by Dr. Sime-

ons of Heppenheim, and describes with great minuteness the symptoms and mode of treatment. The disease occurs most commonly in females who have ceased to menstruate, or have been previously much subject to rheumatic, gouty, or syphilitic affections, though it is by no means confined to the sex. The treatment necessarily consists of topical or general bleeding, according to circumstances, and the use of antiphlogistic regimen throughout. Dr. S. is disposed to consider belladonna as a medicament of inestimable value in diseases of the eye, and in connexion therewith he has some observations upon the *polarity* existing between the iris and retina, the brain and ganglionic system, &c. bordering too closely on the sublime to be very intelligible, though we believe he means nothing more than to give a better sounding name to that which ordinary mortals call *sympathy*.

Dr. Simeons also relates an instance of luxation of the vertebræ, which is of peculiar interest; the patient fell from a tree top, about forty feet to the ground, and was taken up insensible. When he first saw him a large swelling extended from the eighth dorsal vertebra to the loins, and concealed the relations of the bones. The patient had recovered his senses, and complained of a weighty pain along the spine; he lay in a very exhausted condition, and frequently fainted. Neither urine nor fæces had been discharged since his fall, and from the place of the swelling downwards all sensibility and power of motion were lost. The accident occurred on the 16th March, 1827. On the 4th of June, when Dr. Simeons supposed this unfortunate patient to have been long numbered among the dead, he was requested by the magistrate of the village to attend to him, as the surgeon under whose care he had been had ceased to prescribe. He found this object of compassion wasted, pale, and enfeebled to an extreme degree. Severe pains in the loins, belly, and upper extremities deprived him of rest and sleep. From the crest of the ilium downwards there was not the slightest sensibility to any sort of irritation, nor the least power of motion. The urine and fæces were passed unconsciously; the urine constantly dropping, but the fæces were frequently retained for eight or ten days: the appetite was almost entirely lost. On the left glutæus, (the patient had constantly reclined on his back slightly turned to the left side,) there was a rounded cavity eight inches in diameter, and three in depth, which, from the putrefaction of the muscles and tendons, caused an insupportable stench. A smaller and more superficial destructive ulcer was situated over the left trochanter. As the swelling over the spine was now diminished, the vertebræ were in a condition to be examined, and the following observations were made. The eleventh dorsal vertebra was thrown backwards about half an inch, the twelfth about a quarter of an inch, without any lateral displacement. Between the spinous process of the last dorsal and first lumbar vertebra there was a space of an inch and a half, and the first lumbar vertebra was displaced half an inch towards the left side. The spines of the second, third, and fourth lumbar vertebræ, were thrown an inch and a half backwards, forming a gradual projection, which gradually sloped again to the level of the spine. No fracture could be discovered by the touch, but on moving the body a grating was perceptible; the patient felt no pain from the examination.

Notwithstanding this apparently hopeless condition Dr. Simeons went earnestly to work, had his patient kept as clean as possible, improved his diet, and

regulated his bowels as well as the nature of the case would admit. He caused the inferior extremities and course of the spine to be rubbed with most powerful stimulants, and administered stimulants internally. Once he gave the patient a grain of phosphorus in four scruples of naphtha vitriolata, and produced such a discharge of bloody urine, and such dreadful pain in the region of the bladder, as to convince him of the impropriety of this medicine. After that, for a long time, he took twenty drops of a mixture of oil of cloves with one drachm of naphtha vitriol. The patient improved in appetite; his ulcers grew better, the smaller one healed, and by the end of August was able to change his position in bed by the aid of a cord from the ceiling. By the month of December he was able to sit upon the side of his bed with his feet upon the floor for an hour at a time. The diseased place on the buttock was diminished one-half, though another smaller ulcer had taken place over the right trochanter. Strength and digestion were restored to a remarkable degree, and in this condition the patient was living in January, 1828, with a fair prospect of still farther amendment.

We pass by Dr. Von Walther's reply to an attack made upon him by a writer in Vienna, because such writings have no place in this journal, and should not appear at all. If a candid inquirer after truth be assailed by the scurrilous criticism of one ignorant of the subject on which he writes, and solely solicitous to gratify an envious or malignant disposition, there is no reason why he should condescend to notice such aggression; as all who are qualified to judge of his merits will do him justice; and as to those not competent to judge, their opinions are of no importance.

Dr. Weber, of Bonn, has furnished a very good paper upon the most important parts of the human eye, accompanied by an excellent coloured plate of the parts, he most minutely describes. This paper is a critical examination of the minute anatomy of the eye, in which Dr. Weber passes in review the observations of Ruysch, Sæmmering, Jacobs, Meckel, &c. and indicates from his own anatomical researches various errors which have passed into currency among oculists. The observations of Dr. Weber are very creditable to his talents, and show that he is practically acquainted with this very important subject.

The paper of professor Mayer, of Berlin, consisting of observations and experiments upon *upas*, with a review of Dr. Horsfield's remarks on the same substance, is replete with interesting matter. But from the little probability that our readers will either have an opportunity of making similar experiments, or a disposition to introduce this substance into practice, were it to be procured, we shall not say more in relation to this memoir. In the succeeding number Dr. Mayer has some observations upon retroversion of the womb, the cicatrization of the womb after successful Cæsarian section, and congenital dropsy of the ovaries. The cicatrization of the womb, he remarks, has rarely been examined after the Cæsarean section had been successfully performed. He therefore describes the condition of a preparation added to the anatomical cabinet of Bonn, taken from the body of a woman, who, eight years previous to her death, had successfully endured the Cæsarean operation, by which the life of herself and child had been preserved. The operation was performed by Hofrath Velten, in March, 1813, who furnished the history of the case. The distance from the under edge of the symphysis pubis to the promontory of the sacrum was scarcely two French inches; the patient was thirty-six years old. The abdomen was

opened in the linea alba, and the incision through the womb extended five inches downwards. During the division of its parietes the womb did not contract in the slightest degree. The infant, a stout boy, and the placenta were removed from the womb, without any remarkable hæmorrhage ensuing, perhaps not more than a pound altogether. From the difficulty of bringing the now greatly relaxed abdominal parietes together, it was necessary to resort to stitches, and this is said to have been the most painful part of the operation. The patient, when questioned after her recovery as to her feelings during the operation, stated, that the sensation caused by the incision through the abdomen she could only compare to what would be produced by drawing a red hot needle over the skin. She assured us that the incision through the womb itself did not cause her the slightest degree of pain.* In the month of May, three months after the operation, the wounds were entirely healed, and mother and child enjoyed the best health.

Eight years after she died, and the uterus was examined by Professor Mayer, who found it in the following condition:—

“The uterus had perfectly regained its natural form and consistence. The length of the womb, from the superior part of the fundus to the edge of the anterior lip of the os uteri, was two inches, seven lines, (French,) long. The diameter, from the insertion of one fallopian tube to the other, one inch, ten lines. On the external surface of the anterior wall of the uterus, the place of the incision through it was indicated by a furrow about one-fourth of an inch long. The peritoneum adhered firmly to the substance of the womb at this point, and covered the furrow above-mentioned. The edges of the wound through the uterus were extremely contracted and drawn inwards; the cicatrix on the inner surface was two lines and a half long. It here projected into the cervix uteri, and commenced by a depression a line and a half broad. The anterior wall of the womb in the vicinity of the cicatrix was three lines thick, the posterior opposite thereto, four. The mouth of the uterus was natural; but a long, thin, fleshy polypus depended from the cervix. The fallopian tube and ovary of the left side were natural; on the right side the tube and ovary were grown together. Several cicatrices appeared on the ovaries. From the foregoing description it appears that as no new formed mass occupied the place of the wound made in the uterus by the Cæsarean section, but the edges were directly united, the union took place either by the first intention, or the intermediate substance, if such had existed, was subsequently absorbed.”

We pass over a long and well written paper by Dr. Fest, of Potsdam, on fracture of the patella; with a description of a new apparatus, &c. to some papers by Dr. Camerer, of Langenau. The first of these is a case of dry gangrene, occurring in a patient sixty-five years old, which was successfully treated by Pott's method. It is true that spirits of camphor and various similar remedies were administered, but the large doses of opium appear to have been the immediate agent in effecting the cure. Opium was also externally applied to the gangrened extremity in form of linament, and, in Dr. Camerer's opinion, with much benefit. His second paper is on the treatment of *pannus*, especially when oc-

* “Beim Einschnitte in den Uterus selbst gab sie uns die Versicherung, dass sie davon nicht den mindeste Schmerz empfunden habe!”

curring in scrofulous subjects. He had a patient, a young man of seventeen years old, over the whole of whose eye a dense mass of blood-vessels were enlarged, so as entirely to obstruct the sight, and even to prevent the eyelids from being properly closed. His treatment consisted of free purging by means of calomel, jalap, &c. and the application of leeches to the lid. When the inflammatory engorgement was removed, the cornea was found to be opaque; by persevering in the application of tart. emetic and cantharides salve behind the ears, keeping up a constant discharge, the opacity of the cornea entirely disappeared. The treatment was begun in the first part of July, and by the 10th of January, ensuing, the young man was perfectly well. The third paper of Dr. Camerer, is an account of a fatal case of spontaneous luxation of the cervical vertebræ. The patient was a woman of sixty years old, who for three months had experienced an extremely severe pain in the head, and a stiffness of the neck, which, however, did not prevent her from attending to her usual occupations. At length she applied to a surgeon, who applied leeches, bled her, and put a blister to the neck. The pain continued to increase daily, until it became so dreadful that she screamed aloud on the slightest motion of the head. On the 21st of July, she first sent for Dr. C. who prescribed for her very judiciously, regarding the disease as analogous to the morbus coxarius. But all treatment was ineffectual; the patient gradually grew worse, suffering horrible pain, and at length became paralysed, insensible, and expired.

A hard swelling occupied the space between the first and second vertebræ, and the neck was bent downwards to the left side. Throughout the disease the patient experienced an exceeding difficulty of swallowing, which Dr. Camerer properly attributes to the injury done to the glosso-pharyngeal nerve. This symptom is found uniformly to accompany this rare but dreadful affection, and according to Mauchart, (quoted by the writer,) who wrote in 1747, and had witnessed such a case, is described by Hippocrates and Galen as indicative of the disease. In the case attended by Mauchart, this difficulty of deglutition was not particularly remarkable.

Dr. Schütte, next, relates a case of inflammation of the caput gallinaginis urethræ, produced by riding on a badly constructed saddle. The symptoms, to a considerable degree, resembled those of gonorrhœa, except that the severe burning pain was felt deep in the perinæum, and produced great distress, the inflammation extending to the neck of the bladder and prostate gland, and of necessity causing pain during evacuation of the bowels, &c. The urine was of a brownish colour and uncommonly fetid, mixed with a thickish, pus-like mucus. A thick, tenacious slime, mixed with blood, was discharged in considerable quantity during the night. Dr. S. saw him a month after the disease began, and found him so much reduced that he ordered him a nourishing diet, Peruvian bark, and opiates at night. For drink, barley-water, &c. The only medicine used with immediate reference to the urinary organs was a decoction of the uva ursi. Externally, a decoction of oak bark, with a small quantity of brandy, applied by means of cloths, cold, to the perinæum; warm applications made the symptoms worse. He recovered entirely in three or four months.

The same surgeon relates a case of suppressio seminis resulting from inflammation of the prostate, and deferent tubes. This disease occurred in a labouring man, who had worked in a marsh for two days, standing in water up to his

knees, with naked limbs. He was married, and though he had proper erections, and coition was followed by the usual pleasurable sensations, no emission took place. On examination from the rectum, the prostate was found to be tumid, and the surrounding parts inflamed. He was treated for this inflammation, kept upon a light diet, and requested to abstain from sexual intercourse. Leeches were applied to the perinæum, and citrine ointment, mingled with sal ammoniac and extract of cicuta were afterwards rubbed upon the same place. In five weeks the prostate had nearly regained its natural size, but still no discharge followed connexion. Dr. Schütte then ordered an injection of tartar emetic, which was persisted in for eleven days. This immediately caused great pain, and an excessive discharge of mucus. On the seventh day of its application the ejaculation of semen in coitu was found to be perfectly natural. An infusion of bitters, and a solution of sal ammoniac were administered, with a view of giving tone to the stomach and removing the remaining enlargement of the prostate. The patient was entirely restored to health.

In the first number of Vol. XII. there are many papers of interesting character, particularly Dr. Græfe's report of the condition of the surgical and ophthalmic institution, and Dr. Hopfer's observations on extirpation of the ovaria, &c. Dr. Wolff has a very good article on suppression of urine and puncture of the bladder, which we mention cursorily, in order to express an opinion founded on a considerable experience, and a careful examination of such operations; we believe that the proper method of puncturing the bladder under almost all circumstances, is by cutting down to the membranous part of the urethra, nearly as in the operation for lithotomy, and opening the neck of the bladder. This at once gives the surgeon the opportunity of passing the catheter and withdrawing the urine through the natural passage, and affords the patient the best chance of speedy recovery. It is true, that it may be a little more painful to the patient, and demand rather more anatomical knowledge of the practitioner; but he who professes to be a surgeon, and has not anatomical knowledge enough to cut *safely* down to the membranous part of the urethra and neck of the bladder, disgraces by his ignorance the title he assumes.

Dr. Löwenhardt has communicated a method of checking the profuse bleeding which frequently ensues from leech-bites, which is as simple as it is successful. It is with a fine needle and thread to draw the edges of the little wounds together; the thread being passed through the cuticle only, gives no pain, and the bleeding is at once suppressed. A small quantity of powdered alum dropped on the surface of a leech-bite, will also check the bleeding very quickly, but it causes considerable smarting, which, in many cases, it would be well to avoid.

We have thus given our readers some idea of the contents of Græfe and Walther's Journal, but of necessity, the sketch is imperfect. A vast amount of interesting matter has not been remarked, because not immediately practical in its bearing, though well worth perusing by those who have access to the original. Hereafter we shall keep up a current report of the labours of our highly respected German colleagues, and shall therefore in future have it in our power to give more ample details from their writings.

J. D. G.

2. *A Practical Treatise on the Typhus or Adynamic Fever.* By JOHN BURNE, M. D. Licentiate of the Royal College of Physicians, London, &c. &c. &c. London, 1828. pp. 248. 8vo.

Of the present book, the medical critics will form very different, and many of them, opposite judgments. The Broussaian will find nothing to support his views, and will therefore throw aside the book as pertaining to the darker ages of medicine; the Cullenian will be startled at some admixture of modern heresy, while he applauds the divisions of fever, and the general tenor of the book; and the followers of our illustrious Rush will look in vain for those luciferous terms, unity of fever, excitability, stimulus, &c.; but the true eclectic in medicine will find in it much to commend; and, that unlike most other books, its greatest fault is brevity.

The author observes, "that all the notions which have been set forth concerning fever appear to him prejudiced, or vague, and undefined, serving only to perplex and embarrass." This is most certainly true, and must continue to be so while medical writers indulge their imaginations rather than exercise their memory; and thus, instead of patiently telling us how to cure *tute, celeriter, et jucunde*, a certain state of the system with a certain group of consequent symptoms, shall run into wild theories concerning remote and proximate causes, bewildering even their own imaginations with a confusion of transitory spectres, which all vanish in the light of experience. All these inventions, *questi bene trovati*, this author has for the most part avoided, and has endeavoured to give us a plain transcript of what he saw, and what may be seen by others, in the old-fashioned style and manner. His book is evidently copied from nature. No man who has become acquainted with typhous fever can fail to recognise the disease in the pages of Dr. Burne. Not only therefore ought his history of this fever to be faithfully studied and confided in, but his opinions on controversial points ought to have a more than ordinary claim on our acquiescence.

Our author sets out by advocating the old division of fevers into *typhous* and *inflammatory*, a division which the writer of this article has long considered as of the first importance; and one that might have saved the lives of thousands, had it been duly studied before the prevalence of typhus pneumonoides in the United States. The unitarian doctrine of fever is a mere bubble of the imagination that ought to be blown aside without further notice. It was the embryo production of a great mind that was unfortunately lost in combating the very disease that would certainly have taught him more correct views. We remember with sorrow how much this doctrine of unity embarrassed our early practice, particularly in the treatment of typhus pneumonoides; and how we continually struggled with difficulties, until we escaped from the trammels of education, and found instruction in the school of Cullen.

The old word typhus our author has thought proper to abandon, because it has not been used in the same sense by all writers since the days of Hippocrates, and is therefore liable to misconception. Of the necessity or the utility of this change we are by no means convinced. All physicians, wherever English books are read, seem to understand thoroughly what is meant by idiopathic typhus. It is true that many of them extend the term to the dying stage of most other fevers—so also may they abuse any substituted word. Nor is the term which

Dr. B. has brought forward entirely free from the very objections which he alleges against typhus. Adynamic is by no means new, but on the contrary, has been applied extensively, and to fevers, too, which are not typhous. We are not among those who fancy that names are of no importance—nay, we should be rejoiced to see the old ones remain undisturbed till some can be invented that are indisputably better, and at least free from all the objections that lie against the first. *Τυφα*, I smoke or smoulder, is highly characteristic of this fever, and seems to distinguish it at once from the open blaze of synocha; but *αδυναμία* merely expresses a want of power which is too common to it and many other diseases. If, therefore, we look to the etymology of the words, we should decidedly prefer the first.

The author's title, adynamic fever, "is intended to include the putrid malignant fevers of Sydenham, the slow nervous fever of Huxham, (certainly his putrid malignant fever also,) the nervous fever of common language, the synochus, the typhus mitior and gravior of Cullen, the jail and hospital fever, the *fièvres essentielles* of the French, the epidemic of the Irish writers, the contagious of Bateman, the typhus of Dr. Armstrong; and the proper, idiopathic, or essential fever of Dr. Clutterbuck." This is precisely as it should be—he confines the term within its proper bounds. In brief, he means to designate the typhus petechialis of Cullen in its two varieties, *gravior* and *mitior*. This subdivision, however, he abandons, and describes the disease under four degrees of violence in a very lucid and intelligible manner. Dr. Armstrong's famous division, which has made so much noise in the world, and has been so extensively applied to other diseases, he does not notice. To this indeed there are so many weighty objections, that we are glad to find this highly practical writer, and faithful delineator of nature, has abandoned them.

In his etiology the author brings forth nothing new. He supposes that the fever results from a certain debilitating inguination of the blood, which is derived from the breathing of an impure atmosphere.

In his pathology he is an advocate for the old doctrine of idiopathic fever, and firmly believes that the disease has no local seat or punctum saliens; and, as he has endeavoured to establish his opinions by post obit examinations, he of course has a fair claim upon our attention and credulity. He has, however, by no means exhausted the subject, or made as extensive an argument as could be desired. This is one of the most important points in modern pathology, and the reader will be disappointed in finding that an author, so liberally endowed with the necessary abilities, and favoured with so many opportunities, has not pressed the argument with greater vehemence.

In the treatment of the disease we are grieved to find there is nothing new, nothing specific. However judiciously he uses the old apparatus, he has added nothing to it; so that we are left to go on in the old way of bleeding, purging, puking, with a copious list of stimulants, a class of medicines that are dangerous in almost any hands. Dr. B. is not an advocate for those copious bleedings which have lately been tried in the British metropolis, and yet he would appear to use the lancet with far more freedom than most other writers. He probably goes in the *middle way*, the safest path no doubt; for, if we are not greatly mistaken, the patient's life in this momentous disease will very often depend on the proper or improper loss of even five or six ounces, and also on the mere

point of taking this by venesection, cupping, or arteriotomy. It is really the Scylla and Charybdis of medicine where many intelligent pilots are wrecked. It is a subject which requires the most sedulous study of every man who is about to encounter this dangerous voyage.

On contemplating the *tout ensemble* of the author's treatment, we are disposed to indulge the most melancholy reflections on the progress of medicine as it relates to typhous fever. After all the immense experience which the last fifteen years has afforded in England and Ireland, the methods of cure of the most eminent physicians are very contradictory, and some of them irreconcilable. It was but a few years ago that an illustrious author brought forward cold bathing as an almost sovereign specific for typhous excitement; indeed so successful was Dr. Currie that hardly any thing else was needed—nothing, unless some eccoprotics, wine, and gruel. Here was no gastro-meningitis, for who ever heard of this disease, or any thing similar, being cured by a few buckets of water and a gallon of wine? But Dr. Currie was not mistaken in this matter, he was too much employed in this disease to be so egregiously deceived. On the other hand the physiological physicians would persuade us that the whole disease is symptomatic of a gastro-meningitis; and that some leeches to the head or stomach will eradicate this, and leave the system to recover with very little further assistance; while Dr. Armstrong, an illustrious name in medicine, finds that the various utility of bleeding, calomel, and warm bathing, are absolutely necessary to enable him to cope with the most vehement cases. The practice of Dr. Burne is that of the true eclectic; he takes a little from every system, and therefore makes up almost as many routines of cure as there are cases to be treated. This we believe is the true method in the present state of science, though it must be confessed that it is infinitely difficult and often dangerous in the execution. There is nothing certain, nothing specific; the physician is under the necessity of watching the disease with incessant care, and of accommodating his prescriptions at all times to the ever various states of the system, a perilous labour, and one which will too often foil the best informed practitioner, till he become fairly instructed in the school of experience. In all other fevers, if lesions be prevented or remedied, the disease will run its course with safety in good constitutions; but in this there is something mortal, which has thus far eluded the collective perspicacity of the medical world.

In many parts of the work there are new and useful observations which are too numerous to come within the compass of the present notice, particularly on the pulse, the state of the blood, suppression of urine with consequent effusion in the brain, and much more, for which we must refer to the book itself.

While we give the author, as we believe, his just meed of praise, it is not presumed that he has no faults. For these, however, we have not sought, nor do they properly come within the tenor of this notice. We should have been glad to find some enlivening quotations from standard books, with all the community of mind which results from collision of opinions. To sit down with an author who brings no one into notice but himself, is like spending an evening with a solitary stranger, instead of enjoying the sparkling collision of a full fireside of old acquaintances and friends.

S. J.

Northumberland, Penn.

5. *Transactions of the Medico-Chirurgical Society of Edinburgh, Vol. III. Part I.* Edinburgh, 1828. pp. 316, plates 4.

A number of the practitioners and teachers of medicine in Edinburgh, sensible of the advantages which may result from associations of medical men, intended for the communication of facts, and the interchange of opinions on professional subjects, and for the collection and publication of important practical observations so frequently made by gentlemen whose avocations do not permit them to undertake separate publications, instituted on the 2d of August, 1821, a society similar to those which have conferred so much benefit on medical science in London and Dublin. As part of their plan, this society has selected and published the most interesting of the communications presented to them; under the title which stands at the head of this article. They have already given to the public two volumes and the first part of the third. The first volume contains twenty-six, and the second twenty-seven memoirs, most of which are extremely interesting, and many of them have been already noticed in this Journal.

The first part of the third volume contains eighteen communications. The initial article is entitled "Observations on Hospital Gangrene, with reference to the Disease chiefly as it appeared in the British Army, during the late war in the Peninsula," and is by J. Boggie, M. D. surgeon to the forces. This disease is deeply interesting to the military surgeon especially, as it prevails in its most aggravated forms, and produces the most deplorable consequences in military and naval hospitals and in ships of war, sometimes proving more fatal in proportion to the numbers affected by it, than any other disease. Dr. Boggie describes two forms of hospital gangrene, the first he denominates contagious gangrene, the second phagedænic gangrenosa. "When a wound or ulcer," he says, "is affected with contagious gangrene, it becomes painful and swollen, loses its healthy florid appearance, and the granulations, which were small and distinct, become flabby, and appear sometimes as if they were distended with air; at other times, vesicles containing a watery coloured fluid, or bloody serum, have been observed, and the sensation in the sore has been described as resembling the stinging of a gnat. The secretion of pus is suspended; the wound is dry and covered with a tenacious, viscid, ash-coloured matter, which adheres firmly to the surface. When this morbid state has existed for some time, a discharge takes place of a thin ichorous matter, of a very peculiar smell; the pain increases, the edges of the wound are reverted, and in general assume a circular form; an erysipelatous redness surrounds the wound, and sometimes extends to a great distance, even over a whole limb; the neighbouring glands, as those of the axilla or groin, swell, inflame, and sometimes suppurate; febrile symptoms become apparent: the pulse is accelerated, full, and strong; the heat of the surface is much increased; the patient complains of nausea and thirst; the tongue is covered with a whitish or brown crust, and the bowels are in general constipated. The inflammation goes on increasing, the thin ichor continues to be discharged in great quantity, and a thick slough, apparently of coagulable lymph, covers the whole surface of the wound; the fetor becomes intolerable, and the pain quite insupportable. In the last stage, there is in general an oozing of blood from the surface of the wound, and not unfrequently distinct hæmor-

rhage, from the corrosion or destruction of the larger blood-vessels. Sphacelus takes place to a greater or less extent; the strength of the patient fails; the pulse sinks; his countenance becomes collapsed and altered; the skin is bedewed with a clammy sweat; and a diarrhœa with hiccup coming on, the scene very soon terminates."

Though this is the most common form of the disease, Dr. B. is persuaded that the fever which accompanies hospital gangrene is not always of so phlogistic a character; often partaking more of a typhoid type; and it is of the utmost consequence in practice to attend to this distinction, as it will be found, that what would be a valuable remedy in the one case, might, if carried to any extent, be very pernicious in the other.

"The other form in which hospital gangrene usually manifests itself is more of a chronic nature; appearing then seldom in a recent wound. Most of the cases which I have seen of it have been in those of some standing, and in patients who had been long in hospital, many of whom had suffered attacks of hospital gangrene in the more acute form; after recovering from which, and when the wound was to all appearance doing well, the granulations healthy, secreting good pus, and sometimes even nearly cicatrized, a small dark-coloured spot or ulceration has appeared, most commonly on the edge of the sore, varying in its dimensions from the size of a millet seed to that of a split pea.

"This little ulceration was in general of a circular form, its edges ragged, its bottom unequal and excavated, and secreting a matter of a very peculiar smell. Ulcerations of the same kind not unfrequently appeared in other points, which, spreading in all directions, united, and soon extended over a great part of the wounded surface. At times, this ulceration has been known to go on, and to cause very considerable destruction of parts, without the system appearing to be much affected by it; but most frequently after it had spread to a certain extent, symptoms denoting constitutional irritation became apparent; these were nausea and loss of appetite, thirst, foul tongue, restlessness, a small and quick pulse, and heat of skin. After the febrile symptoms had appeared, the progress of the ulceration was more rapid, and very often extended beyond the limits of the original sore; the discharge became bloody, and the fetor peculiar to this affection more offensive. Sphacelus in many instances took place, and some time before death the same train of symptoms occurred, already described as taking place in the last stage of the more acute form of the disease. This is the depascent, or phagedenic form of hospital gangrene, or what may be called phagedæna gangrænosa."

The duration of the disease varies; it may continue for twenty days or even longer, or may terminate as early as the third day, in recovery or death. Patients are liable to frequent relapses.

From all the phenomena of the disease, Dr. B. thinks that we are warranted in "considering hospital gangrene, more especially that form of it named contagious gangrene, to be a peculiar inflammatory action attacking wounded surfaces; varying in its character according to the constitution of the patient, type of the accompanying fever, and other circumstances; nearly allied to erysipelas, if, indeed, it be not a modification of that disease, and depending on a diversity of causes, as I shall endeavour to make apparent."

The causes which induce this affection have never been very satisfactorily

explained. Dr. B. attributes it to the following:—Particular states of the atmosphere, inattention to cleanliness, acrid or irritating applications, stimulating food, intemperance in the use of wine and spirituous liquors, motion, or mechanical irritation, and specific contagion; and under each of these heads he cites many facts in support of his opinion. If these views of the causes of hospital gangrene be correct, they show that the ordinary means which have been employed for the prevention of this disease, such as ventilation, separation, fumigation, or breaking up the establishment where it prevails, will be of little avail so long as the true causes of the disease are overlooked. Dr. B. thinks that for the prevention of this affection in a recent wound, the great object to be held in view is to avoid all sources of irritation, and by all means in our power to keep down inflammation. From the moment of receiving the injury, a moderately antiphlogistic regimen should be prescribed, the wound kept cool, the discharges from it removed by careful ablution, and rest enjoined. Dr. B. recommends that no bandages be applied in the first instance to gun-shot wounds.

In the treatment of this disease, if the constitution be much affected, general remedies will be required; “if, on the contrary, the affection appears to be entirely local, the cure may be trusted to topical applications; but, in many cases, both the one and the other will be found to be necessary. It is of the utmost consequence, also, to attend to the type of the accompanying fever and to ascertain whether the gangrene is simple, or complicated with any other disease, such as scurvy, or bilious fever, in which case its character will be modified, and the corresponding treatment must also be different.”

Dr. B. confines himself to the simple form of the disease, the treatment of which may be divided into general and local. When hospital gangrene occurs in a recent wound, and in young healthy men, or in men of the middle period of life, who are most frequently the subjects of it, the accompanying fever is, according to our author, almost always inflammatory, and blood-letting will be required, proportioned to the violence of the inflammation, and the age and strength of the patient. In men, however, of a less robust constitution, who may have lingered long in hospital, or suffered much from ill health, blood-letting is altogether inadmissible, or should be used very sparingly. As an auxiliary to general bleeding, Dr. Trotter has proposed local detraction, and Dr. B. though he has not employed it himself, thinks there is no objection to it.

Cathartics Dr. B. considers as “the remedies, next to blood-letting, the best calculated for lessening arterial action in inflammatory diseases: and the use of them was indicated in cases where that remedy was inadmissible, or at least not so much required. These cases were of a doubtful nature, where general inflammatory action existed to a certain degree, but where, from the long confinement of the patient, or his previous state of ill health, venesection could not with safety be employed, or where the fever was evidently typhoid. Among the poor in civil hospitals, purgative medicines will be found, in this disease, I suspect, unless in very extraordinary cases, to be the most useful, indeed the safest evacuants.”

Emetics have been highly extolled, and Dr. B. has often seen them used, and sometimes with advantage; but he considers them as inferior to cathartics.

"The cases to which they are chiefly applicable, are those where the stomach is loaded, and where the fever appears to be of a bilious character."

Bark in the commencement of this disease, is entirely useless; but in the more advanced stages, when the inflammation has abated, it may be given as a useful remedy, either alone or in conjunction with the mineral acids.

The cold affusion has been recommended, but never tried in this disease. Dr. B. would expect agreeable results from sponging the body with tepid water.

"The violent pain which always exists in the commencement of this disease, seems to call for the use of opium; but as long as the fever and inflammation continue, it will tend only, both by its direct stimulating properties, and by deranging the functions of the stomach and chylopoietic viscera, to aggravate the symptoms. In the more advanced stages, however, when the inflammatory symptoms have subsided, should the patient complain of restlessness, it may be allowed, and then I have no doubt but that it will be found beneficial."

Camphor, Dr. B. thinks, may perhaps be used where opium would be improper; but he has no idea of its possessing any specific powers in hospital gangrene, and it appears to him to be applicable chiefly in the low state of the disease, which sometimes succeeds to great vascular action, or where the fever is evidently typhoid. In such cases he has occasionally used it with good effect.

"The use of wine, as is observed by Dr. Thomson, in the early stage of hospital gangrene, is liable to still stronger objections than opium, for it adds to the violence of the fever, without having, like opium, a tendency to sooth or diminish the local pain." But in the advanced stages, in poor, old, infirm people, or where the patients have lingered long in hospitals, and their health has been broken by previous disease, or where the fever is evidently from the first of a typhoid character, it will be very beneficial.

"The diet, in the first instance, should be very light, consisting chiefly of farinaceous matter; indeed I ought rather to say, that an almost total abstinence should be enjoined; but when the febrile symptoms abate, it may be made more nourishing. The drinks should be of the weakest kind, such as tea, watergruel, and lemonade. Ripe fruits, such as oranges, may be freely used; and from the first, the regimen altogether ought to be strictly antiphlogistic."

A great variety of topical applications have been recommended in this disease. When the inflammation continues violent, cold applications, such as water alone, rendered colder artificially, and solutions of sugar of lead, are what Dr. B. prefers. To obtain all the advantage from the sedative effect of cold, cloths dipped in the liquid should be applied to the part, and kept constantly moist.

Poultices of all kinds Dr. B. considers as objectionable.

"When the inflammation abates, the sloughs separate, healthy pus is secreted, and florid granulations spring up: when this is the case, the wound should be dressed simply with dry lint, over which a pledget of emollient ointment ought to be applied, and the whole supported by a good compress and roller. Should the sloughs continue to adhere after the inflammation has abated, some stimulating application, such as a mixture of resinous ointment, and oil of turpentine, known by the name of warm dressing, may be made to the wound, or an ointment composed of unguent. resinosum and oxyd. hydrarg. rubrum, in the pro-

portion of ζ i. of the latter to ζ i. of the former. On such occasions I have also found the diluted nitric or muriatic acids, or the citric and acetic acids, good applications: in the same cases a solution of argentum nitratum will be found very useful. It is in this stage of the inflammatory gangrene, that warm fomentations and poultices may occasionally be employed with advantage, and that the stronger escharotics, such as the concentrated mineral acids, caustic alkalis, arsenical solution, or the actual cautery, may be used most successfully; but it is not improbable, that escharotics, applied at a very early period, when the morbid action is just commencing, may sometimes, particularly in old wounds, arrest at once the progress of the disease. A more generous diet may now be allowed, and even a small quantity of wine. But although the patient has arrived at the stage of convalescence, and may be considered as safe, I can affirm, from extensive experience on this point, that if he be guilty of any excess, more especially in drinking, of using exercise, of not attending to the proper dressing of the wound, or neglecting the state of the digestive organs, he is almost certain of suffering a relapse, when the same train of symptoms will be renewed, and the danger of the patient will be infinitely greater, and exactly in proportion to the state of debility to which he is reduced.

“Those who are entrusted with the charge of patients in this state, cannot be too attentive to the proper dressing of their wounds. The new granulations continue long very weak, and extremely liable to fall into disease; and the danger of this will be in proportion to the extent of the renewed surface. Nothing favours this diseased action more than inattention to the cleanliness of the wound, and the want of due support from proper bandaging. When the discharge is long confined, it becomes acrid and even poisonous, and from this cause, more than any other, I conceive, that that form of the disease named phagedæna, most frequently arises. If the discharge continue very abundant, the dressings should be frequently renewed, and some astringent lotion, such as a weak solution of acetas plumbi or sulphas zinci used at each dressing; after which powder of Peruvian bark may be applied to the wound as an absorbent. In this case also, it may be taken internally, with very good effect. Should phagedæna supervene, which may be known by the appearance of a small dark spot or ulceration, escharotics should immediately be applied.

“This form of the disease, in the first instance, is purely local, and we are almost sure of putting a stop to its progress, by local remedies alone. Those which I have been chiefly in the habit of using are, argentum nitratum and oxyd. hydrarg. rubr.; but the undiluted sulphuric, nitric, and muriatic acids, and the caustic alkalies, have also been often employed with the same intention.”

“An incipient phagedæna may be often removed by one application of the precipitate, but if the ulceration has made much progress, or has penetrated deep into the soft parts, several applications may be necessary, as the eschar only penetrates to a certain depth.” In the same cases the solution of arsenic may be employed. Mr. Blackadder is of opinion, that hospital gangrene, under any form, may be speedily and certainly cured by the arsenical solution.

Dr. B. thinks that in cases which have resisted other means, we should not hesitate to employ the actual cautery.

With regard to amputation, which it has been said, may be performed with success, even when the gangrene is extending, Dr. B. is of opinion, that where the

disease is entirely local, without the constitution being much affected, the operation may be performed, and without any risk of the disease returning, or affecting the stump; but in contagious gangrene, in which there is always inflammation to a greater or less degree with fever, he considers such practice extremely dangerous, and contrary to all the rules which have ever been laid down on this subject. The operation, he thinks, should never be thought of, until the fever and inflammation abate, and then, in all probability, the progress of the gangrene will be found to be stopped.

There is a species of gangrene complicated with a violent remittent fever, like the yellow fever, spoken of by Dr. Hennen, and also seen by Dr. Boggie, which may be mistaken for hospital gangrene, but which is said to be very different. It appears to be symptomatic of constitutional derangement, and has proved fatal in all the cases met with by Dr. G.

This interesting memoir is concluded with a tabular view of the mortality in the Cordeleria Hospital, where the hospital gangrene prevailed, showing the decrease of mortality on the introduction of an antiphlogistic treatment.

The second article is an account of a remarkable case of crural hernia, by George Ballingall, M. D., F. R. S. E. &c.

The third memoir is on the natural or spontaneous cure of syphilis, and is by John Wilson, M. D. of Hull. The object of the author is to show that syphilis may occur spontaneously, and that it may be often cured by antiphlogistics; two facts that we believe are now proved beyond cavil or dispute.

A case in which a polypus of great size was removed from the root of the tongue by ligature, by Richard Huie, M. D. &c. and which constitutes the fourth article, we have transferred to our periscope.

An account of the viscera of the common sword-fish, (*Xiphias gladius*, Linn.) by Robert E. Grant, M. D., F. R. S. E. follows, this not being particularly interesting to us as physicians, we pass over.

The sixth article is an account of the epidemic erysipelas which appeared in Montrose and the neighbourhood in 1822, by W. Gibson, M. D. In the month of February, 1822, Dr. Gibson saw at Arbroath several cases of erysipelas, the appearance and history of which convinced him that the disease, as it then prevailed, was of a contagious nature, and shortly afterwards instances of the disease became so frequent in Montrose and the neighbourhood, and were marked by such peculiar circumstances as to leave no doubt on the minds of the medical men that it was prevailing in this latter situation also epidemically, and it continued to do so for about four years. It differed, according to Dr. Gibson, from the sporadic erysipelas as observed in former times, in the greater severity of the symptoms, and its greater fatality, differences, which can, however, hardly be considered as specific. "The disease was not so much confined to the head or face, as common erysipelas, but it frequently attacked other parts of the surface of the body. Sometimes the internal fauces were attacked, and if it spread to the trachea, it generally proved fatal. It spread more rapidly and much more extensively. It was followed, in almost every case, by extensive diffuse suppurations in the cellular substance—particularly when other parts than the head were attacked, and sometimes by sloughing of the parts affected. It frequently supervened on wounds, particularly if they were situated on the head or face, sometimes on ulcers. Occasionally, the disease seemed to be con-

fined to the cellular membrane, as extensive suppurations would occur with little or no apparent disease of the skin, and even without any redness."

The next article is a case of congenital disease or malformation of the thigh-bone, illustrating the interstitial absorption of the *cervix femoris*, by Robert Knox, M. D. &c. It occurred in a child two years old, who died of a lingering and obscure disease. On cutting into the hip joint, all its parts were found sound; the acetabulum not changed in form, inflamed, or in any way affected, and the head of the femur also in a perfectly natural state; "but the neck of the bone might be said to have disappeared. The trochanters appeared much longer than usual, and more particularly the larger trochanter; the head of the bone, in consequence of the disappearance of the neck, had become, to use the language of botanists, *sessile*; it had descended to a level with the trochanter, and indeed bore the strongest miniature resemblance to those specimens of diseased femur, which, from the days of Trioen, to the present time, have been imposed on the profession as specimens of bony union following fracture of the *cervix femoris*."

The eighth article is on the sudden spontaneous obstruction of the canals of the larger arteries of the body, with some observations on the process employed by nature to prevent or arrest hæmorrhage from lacerated arteries, by John W. Turner, Professor of Surgery to the Royal College of Surgeons, &c. It has been sometimes observed that the pulse has suddenly and permanently ceased in one part of the body; and in some cases of this kind, on examination after death, it has been found that an obliteration of the tube of the artery had taken place. Of this morbid affection which appears to have escaped notice till lately, Mr. Turner has given a very interesting account, and related many cases which have fallen under his own observation, or which have been observed by others. The first case is related very minutely, and we shall take an early opportunity of laying it before our readers. Mr. Turner adopts the explanation suggested by Dr. Thompson, that the obstruction in these cases is "produced in the same manner as hæmorrhage is sometimes prevented in arteries which have been torn across, and, as he believed, obstruction of the arteries had been occasioned, in some cases of gun-shot wounds which he had observed, where the ball had passed close to the trunk of an artery without dividing it; viz. by the laceration of the internal coats of the vessel, and the projection of their edges and flaps into its tube, by which an obstruction is immediately produced to the passage of the blood, the detained portion of this fluid coagulates, and afterwards the vessel is obliterated by the adhesive inflammation excited in the site of the lacerations." The rupture of the internal coats of an artery is not, however, always followed by the obliteration of the vessel, it perhaps more frequently gives rise to aneurism.

Arteries are not always obstructed or obliterated by the cause already noticed; it is sometimes produced by the pressure of tumours, the spontaneous cure of aneurisms, thickening of the internal coat of the artery, &c.

Art. IX. is a case of aneurism of the aorta, with disease of the spinal cord, by Thomas Molison, M. D. &c.

Art. X. is a case of strangulated umbilical hernia, by James Simson, M. D. &c. the most interesting fact relating to which is that it was operated on with success.

Art. XI. is on a remarkable alteration in the structure of the patella, produced apparently by the presence of a loose cartilage within the cavity of the knee-joint, by Robert Knox, M. D. &c. This occurred in a female about thirty years of age. There was found developed, apparently, in the tendon of the extensor, and surmounting the upper margin of the patella, an additional bone as if a second patella. "The remaining portions are three; a large central portion, corresponding to the regular patella, whose inner or articular surface is evidently undergoing the same change as that surface of the femur on which it must chiefly have played, namely, the outer condyle: and on the margins of this patella, viz. on the internal and inferior, but, at the same time, somewhat external margins, there are two additional portions of bone, of considerable magnitude, organised, apparently, altogether as the original patella, and performing similar functions."

Art. XII. is a case of disease of the heart, by J. H. Wishart, F. R. S. E. &c. an analysis of which we shall insert in our periscope.

Art. XIII. Observations on the causes of the sounds produced by the action of the heart, by John W. Turner, Professor, &c.

If the ear be applied to the chest in the region of the heart, either directly or through the medium of the stethoscope, there are perceived for each pulsation of the arteries, two sounds or beats following each other in immediate succession, and then a short interval is observed, during which no action or motion of the heart is perceptible, and after this the two consecutive sounds are again heard. These two sounds have been considered and described as indicating the successive contractions of the ventricles and auricles. M. Lannec states "at the moment the artery strikes the finger, the ear is slightly raised by a motion of the heart synchronous with that of the artery, and accompanied by a sound somewhat dull but distinct. The synchronism does not permit us to doubt that the phenomenon is owing to the contraction of the ventricles. *Immediately after, and without any interval*, a sound more sharp and analogous to that of a valve which is raised, the crack of a whip, or the lapping of a dog, announces the contraction of the auricles.' He adds, 'No motion sensible to the ear accompanies this sound; *no interval* separates it from the duller noise accompanied by the raising of the ear, that indicates the contraction of the ventricles, which it seems to limit and to interrupt suddenly.' 'Immediately after the systole of the auricles, there is an interval of repose, very short, but well marked; after which the ventricles are again perceived to raise themselves with the dull sound and gradual progression which are peculiar to them; the sudden and more sonorous contraction of the auricles follows, and the heart again falls for an instant into an absolute immobility.'"

Mr. Turner has long been doubtful as to the accuracy of this statement, and he has satisfied himself by various reasons that it is incorrect. He is of opinion that the first sound is owing to the contraction of the ventricles, the second to the impulse occasioned by the falling back on the pericardium, of the relaxed heart in its diastole, after it has been elevated or moved from its place in the systole; and perhaps also by the expansion or dilating of the heart.

Art. XIV. On a new method of preserving anatomical preparations, by John Davy, M. D., F. R. S. &c.

This method consists in immersing the part to be preserved in sulphurous acid, which may be prepared in a manner equally economical and easy, by

burning sulphur matches* over water, in any appropriate vessel, agitating the water when the match ceases to burn, and when the water is sufficiently impregnated with the acid gas, filtering the solution to render it clear and transparent. The principal advantages of this method consists, Mr. Davy says, 1st, in its great cheapness; 2dly, in the durability of its preservative powers; 3dly, in the clear and instructive manner in which it displays the minute structure of textures and compound parts. "It does not, like spirit of wine, and a solution of alum, contract what is immersed in it; it does not, like a saturated solution of common salt, or of nitre, or of any of the salts of chlorine which I have tried, after a little while, lose its transparency and become thick and turbid; nor does it, like a solution of corrosive sublimate, deposite on the inside of the glass and on the preparation itself, a crust which soon becomes a complete mask. On the contrary, it expands and developes the parts, some more, some less, so as to magnify them and make them more distinct, effecting in structure what the lens does in vision; and at the same time it remains clear, so that the lens still may be employed to heighten the effect and convey still more minute information of the object."

Art. XVI. Observations on the effects of the sun's rays on the human body, by John Davy, M. D. &c.

It is well known that exposure to the sun's rays renders the skin brown, but the manner in which it produces this, the parts of the skin in which it takes place, or its exact causes, or its consequences, have never been minutely investigated. Dr. Davy has examined this subject experimentally, and from the observation he has made, and from anological reasoning he is disposed to believe that the discoloration takes place beneath the cuticle, and that the seat of it principally is the surface of the cutis. His experiments relative to the cause of the discoloration are not as satisfactory as could be wished, but they show that the effect is produced solely by the undecomposed rays, and he thinks that they act "both indirectly by the medium of inflammation in changing the colour of the skin, and directly, without the intervention of inflammation, in producing the same effect, or in heightening it when produced."

Sir Everard Home has shown that when the skin is painted black, it is defended from the scorching effect of the sun's rays; and from thence he infers that the dark rete mucosum of the negro possesses the same protecting power. Dr. Davy has made experiments similar to those of Sir E. Home, and modified them, and with the same results. He has, moreover, found that all the opaque colours which he applied to the skin, whether red, orange, blue, or green, afforded protection from the scorching influence of the sun's rays, equal to that afforded by black. "There is this difference, however, between the skin of a white person painted, and of a negro with a black skin; that in the one instance, the black surface is laid on the semi-transparent cuticle, whilst on the other, it is situated under the cuticle, and on the surface of the cutis. In the one instance, the extinguishing medium is external to the insensible covering of the body; in the other, it is in contact with the sensitive surface, and may be considered as a part of it. Circumstances, too, relative to the very great penetrating power of the sun's rays, have had rather a similar tendency to augment

* These are best made for this purpose by dipping cotton thread in melted sulphur.

my doubts of the strict accuracy of this analytical conclusion. As the facts which I now allude to, appear to me to be new and curious, I shall mention some of them. When the sun's rays are concentrated by a lens, they penetrate, I find, through bone, as a portion of the cranium; through nine folds of black crape; and, what is most extraordinary, through rolled platinum. It was easy to ascertain their penetrating through the former substances, by a luminous point appearing on a surface beneath; but through the opaque platinum no light passed, yet the rays of heat passed, which was best indicated by the sensation produced, when the metal was placed on the sensitive skin, the only part of which affected was that corresponding to the focus of the lens, the metal itself not becoming sensibly warmer. Taking then into consideration the difference between the painted cuticle and the dark 'rete mucosum,' and this very remarkable penetrating power of the sun's rays, it appeared to me that more direct experiments than those of Sir Everard Home were requisite to ascertain beyond all doubt, if the function of the colouring matter of the skin of the negro is really such as it has been inferred to be. With a view to this, I have subjected the skin of the negro to the direct rays of the sun, and I have made a similar trial on a mole on a fair skin."

From the result of these experiments, Dr. Davy is "disposed to infer that the colouring matter of the skin of the negro affords some protection from the scorching effects of the sun's rays, but not complete protection, and that were his skin as much disposed to inflame from the action of the sun's rays as the skin of the fairest European, this colouring matter would not prevent occasional vesication."

Art. XVIII. Additional cases and observations illustrating the origin of tubercles, by W. P. Alison, M. D., F. R. S. E. &c. and Joint Professor of the Institutes of Medicine in the University of Edinburgh.

Dr. Alison, some time since, presented the society with a communication, tending to elucidate the two following questions:—"1st. Whether the scrofulous diathesis, or disposition to scrofulous disease, unfortunately so prevalent in our climate, is to be regarded as the result of the climate alone, or whether other and more remediable circumstances in the mode of life of those who become so affected, contribute generally and powerfully to its production; and 2dly, whether the deposition of tubercles, so often the original cause of danger and death in scrofulous diseases, is to be regarded in any case, or in any considerable number of cases, as an effect of inflammatory action."

On the first of these questions, Dr. A. has since obtained evidence from various quarters, tending to confirm him in the opinion that in regard to the tendency to scrofulous diseases, and particularly to those in which tubercles are formed, there is a greater difference between the inhabitants of large towns and of the country, than between the inhabitants of the warm and cold climates, at least of Europe; and therefore, that the general prevalence of the scrofulous diathesis is to be ascribed, rather to the modes of life which an advanced and artificial state of society implies, than to the circumstance of climate.

In regard to the second point, Dr. Alison's "object was not to explain the whole history, and all the possible causes of tubercles, but only to investigate the question, which seemed of the greatest practical importance. Whether or not inflammatory action has, in any circumstances, the power to produce them?" That it has the most satisfactory evidence, appears to us to have been

furnished by Dr. A. in his interesting paper, and by others; and we agree with Dr. A. "that scrofulous tubercles may be, and often are deposited in consequence of inflammatory action; and therefore, that as, on the one hand, scrofulous diseases may be in many cases prevented by applying the *tonic regimen* to persons of feeble constitution, but not yet affected with actual disease; so, on the other, they may also be frequently prevented by the early and prudent use of the *antiphlogistic remedies* in those in whom the slight inflammatory complaints so often preceding them have already appeared.

"This general conclusion does not differ from that which I believe the greater number of practitioners have been induced to form from their own practical observations; but it seems to me of great importance to have attained to it by pathological inquiries, founded on fatal cases, because, until the pathological question as to the frequent dependence of tubercles on inflammation is determined, no observations on the effect of the antiphlogistic remedies, where tubercular disease is apprehended, if made on cases that terminate favourably, can be held to be conclusive on the subject."

Under the head of pathology, in the periscope of the present number, will be found the views of Dr. Bouillaud respecting the formation of tubercles, and which are confirmatory of those of Dr. Alison.

The concluding paper is a supplement to the article on the obstruction of the canals of the arteries, by J. W. Turner, Professor, &c. containing two cases of laceration of the popliteal artery, from dislocation of the knee-joint.

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4. *Litcrarische Annalen der Gesammten Heilkunde*. Herausgegeben von Dr. JUSTUS FRIEDERICK CARL HECKER, &c. Vierter Jahrgang. September, 1828. Berlin.

The Literary Annals of Medicine, published under the immediate superintendence of Dr. Hecker, exhibits on its list of collaborators, the names of some of the most distinguished German physicians; among these may be mentioned Von Ammon, Carus, Otto of Copenhagen, E. Von Siebold, Lichtenstädt, and numerous others conspicuous for their high acquirements in the various departments of medical science. The annals appear monthly in numbers containing from 120 to 130 pages, at eight dollars per annum. It is printed on better paper, and with more typographical neatness, than any other journal we have yet received from the same country; like the journal of surgery and ophthalmology it is printed in the Roman character, which we hope will soon entirely supersede the inelegant Gothic types, in all scientific German works. The contents of the present number of the Annals are thus arranged:—1st. Original articles; 2d. Critical notices: A. Practical medicine; B. Medical police; c. Clinical medicine, clinical institutions; D. Obstetrics; E. *Materia medica*; 3d. New publications; 4th, New Journals of medicine.

There are two original papers in the number before us; the first is by Dr. M. A. J. Schön of Hamburg, and is a collection of cases of diseases of the heart and large vessels, with dissections. Six cases are related, and the symptoms from which he formed the diagnosis are minutely detailed. Dissection, however, generally revealed a condition differing greatly from the anticipations of the practitioner. The diseases observed were chiefly results of chronic inflammation of

the enveloping and lining membrane of the heart, producing enlargement of the cavities, thickening of the semilunar valves; inflammation and dropsy of the pericardium; aneurismal enlargement of the arch of the aorta, &c. In the cases where the heart was found to be most diseased, no obvious external cause could be assigned; the patients had generally been affected with pulmonary irritation or inflammation, mostly attended by cough. In one case, the patient a female of fifty-six years old, the physician thought the disease to be hydrothorax, combined with general dropsy. On dissection, the chest and pericardium were found to contain a great quantity of yellowish fluid, but the cause of all the morbid changes appears to have been an enlargement of the right auricle of the heart, and the free communication with the left by the foramen ovale, which was altogether open, so that very little blood was sent into the pulmonary vessels. To the practitioner the perusal of these cases in detail could not fail to be instructive and agreeable; we cannot introduce them here on account of their number and length; nor can we say that any general inference of importance is to be drawn from them, except it be, that the difficulty of the diagnosis in such cases, should deeply impress practitioners with the necessity of acquiring skill in the use of the stethoscope, which alone can enable them to prescribe with the requisite degree of accuracy in diseases of the chest.

The second paper is on acute idiopathic inflammation of the heart, by Dr. A. H. Krause of Berlin, in which he gives an account of a case which occurred in his own practice. Dr. K. prefaces his observations with some remarks on the diagnosis of this rare but dreadful disease, and quotes from a treatise by Dr. Heim of Berlin, published in 1819, the symptoms which that practitioner has stated to be pathognomonic. We have never had the advantage of seeing Dr. Heim's treatise; this practitioner witnessed three cases of this disease, and his diagnostics are stated by the present writer to be admirable; we therefore extract them from Dr. Krause's paper for the benefit of our readers.

The disease begins with shivering and trembling of the whole body, and intermittent chill, which latter when present may continue during twenty-four hours, but is followed by very little or no heat. There is no acute stitch felt, but pains in the heart precede the distinct attack for twenty-four hours. Sometimes the disease comes on suddenly. The patient has no cough; if in any instance cough occurs it is entirely dry, neither mucus nor blood being expectorated. In the commencement the patient has the greatest anguish and the most agonizing pain, not in the chest generally, but immediately in the heart itself. The patient shrieks out and is not quiet more than a second, repeating with great force the same word three or four times to express his most distressing sensations. He does not lie still an instant, but tosses himself about in bed like one half distracted, while his arms and head are in continued motion. The patient presses upon the region of the heart, and if pressure be made by a bystander, he impetuously demands that it shall be increased. The countenance is always extremely pale. The chest is elevated, and the head which is in perpetual motion is thrown more backwards. The face and hands are quite cold. Before each necessary bleeding, the pulse is throughout not to be felt. The patient feels every movement of the heart, and even complains of its painful throbbing, yet when the physician applies his hand to the chest, he cannot discover the least irregularity. The stronger the pulsation of the heart is, the greater is the pain felt in the organ;

it seems to the patient to strike upon a wounded spot. He is nauseated, but does not vomit; the greater his thirst is, so much the more does he refuse to drink, even when a glass of water is held to his mouth. He is very loquacious, even when otherwise naturally silent; we might also say physically, what the scriptures assert morally, that "out of the fulness of the heart the mouth speaketh." Fainting and delirium are not uncommon.

A copious bleeding is followed by so great an alleviation of anguish and pain, which lasts for several hours, that the patient thinks himself quite cured. But the symptoms suddenly return again after the cessation. The anguish and pain is increased by warm applications to the chest, and the patient throws them off. If the treatment be neglected, or improper, the patient dies either in consequence of polypous formations on the internal or external surface of the heart, as well as on the internal surface of the pericardium, or with adhesions of the heart to this membrane, and effusions of pus or water into the cavity of the pericardium.

The case related by Dr. Krause, in which also he had the assistance of Dr. Heim, manifested the foregoing symptoms in a striking manner. By free and ample bleeding, and the use of digitalis, &c. the patient was quite restored to his usual health in ten or twelve days.

The critical part of Hecker's Annals, as might be inferred from the character of those engaged therein, is executed in a candid and dignified spirit, with a single eye to the great interests of the profession. Long may they continue their meritorious efforts in the cause of science and humanity.

Before we conclude our present observations on German journals, there is one topic they suggest, to which we cannot avoid calling the serious attention of our professional brethren, especially of such as occasionally publish their experience for the benefit of others. The great aim of the German medical writers is to express themselves in *pure* German. Consequently their journals are not disfigured, deformed, and obscured by a pitiful and ignorant pedantry which induces some of our writers frequently to interlard their remarks with *foreign words and phrases*, as if our language were too poor to express their ideas, or too ignoble to utter their important conceptions with sufficient magniloquence. If they would recollect that a comparatively small number of those who are to read their remarks, are at best but tolerable classical scholars, and a majority of them, totally unacquainted with French, Italian, &c. they would probably confine themselves to words to be found in the best generally used English dictionaries. Nay, we can assure them that if they cannot express their observations or ideas in good English, they are either excessively ignorant of their mother tongue, or their notions are not worth the trouble of writing down; as there is no word, nor combination of words expressive of ideas, in *any language*, which may not be *fully* rendered by an immediate equivalent, or by a perfectly idiomatic periphrase, into English. If every writer were allowed to show what foreign languages he may have learned, or has a smattering of, (and why is it not as allowable to use the expressions of one foreign language as another?) our books would soon become a jargon, worse than any of the dialects of Babel. In fact, good scholars never make use of such shallow devices to display learning; and as a general rule, it may be safely assumed that the learning of the individual is in the inverse proportion to his employment of such fo-

reign fragments. It would be invidious, (and we have no wish to point at persons,) were we to refer to special instances of such sins against good sense and good taste; but as the evil, if unchecked, is of a nature to increase, we deem it a duty to call attention to its magnitude. The English language, though wanting in many peculiarities that other tongues possess, is nevertheless a noble and powerful dialect, capable of every variety of expression required by the conditions of life and sociality. To render it still more suitable to all purposes, it is proper that every writer, instead of snatching up the first foreign word that may convey his thought, should be at some pains to ascertain whether he could not find a far better expression in the language used by those to whom, and for whom he professes to write.

J. D. G.

5. *Medical essays on Fever, Inflammation, Rheumatism, Diseases of the Heart, &c.* By JOSEPH BROWN, M. D. &c. London, 1828, pp. 309, 8vo.

Each of the subjects treated on by Dr. Brown, is of sufficient importance to fill a volume of a much larger size, than that with which he has favoured us. His materials are good, and fraught with interest, presenting what in this age of book-making, is almost a phenomenon, a series of original and practical observations on many highly interesting points of pathology and practice.

Dr. Brown commences his essay on fever with a short, but lucid view of the effects of malaria, the most extensively diffused, and probably the most active cause of the generality of febrile diseases; our author thinks, with M'Culloch, that many other complaints besides fevers, strictly speaking, are attributable to this agent, though he does not extend the list to such a formidable length as that writer.

Whilst speaking of typhus, Dr. Brown makes the following just and forcible remarks; "There are few words, of which the import is more vague than 'typhus;' its misapplication, from carelessness, or occasionally from reasons of a more reprehensible nature, is so general, that it is to be wished it were either more strictly defined, or altogether banished from our vocabulary."

Dr. Brown is a violent opposer of the doctrines of Broussais, and has for some time carried on a controversy with him; we shall not attempt, in this place, to analyse his arguments, but will give his own theory of fever, without further comment, than, that it is by no means a new one.

He considers that the nervous system is affected at the very commencement of the attack, and that in most cases of continued fever, this affection endures, and displays itself by perceptible signs, to the close. The vascular system is either simultaneously, or subsequently disordered; and, in a short time, those of secretion, assimilation, and nutrition, follow in their train, and the disease becomes one "of the whole system, in every kind of sense." Dr. Brown admits, that the excited state of the circulation, is accompanied by inflammations of important vital organs, which must be controlled and subdued, but, he also considers that this is not sufficient to cure the fever, regarding these inflammations as occasional and important concomitants, rather than the cause of the disease.

The general views of the treatment to be adopted in fevers, are good, and deserve attention, particularly those on local bleedings, and purgatives; and

prove that, although our author is a violent opposer of the Broussain theory, he has been led to an analogous practice.

Essay 3d, Is on Inflammation, and contains some valuable practical observations, on the different plans of treatment to be pursued.

Essay 4th, On Rheumatism, is a kind of preface to the succeeding one, on Diseases of the Heart, which appears to be a short, but excellent monograph of the disorders of that vitally important organ. Dr. Brown attributes one half of the diseases of the heart, to rheumatism; this fact, which has been overlooked by many writers, is, however, supported by Scudamore; our author supports his observations by adverting to the anatomical structure of the parts, and particularly of the continuity of the investing membrane, with the fibrous texture which is the seat of external rheumatism; he quotes largely from the excellent description of this arrangement, as given by Dr. Godman, in his "Anatomical Investigations."

"If this description of the formation of the pericardium be correct, and I see no reason to question its accuracy, then will the circumstance of this membrane being frequently assailed with rheumatic inflammation after bleeding, be merely a part of the general fact long acknowledged, and such continuity certainly tends to explain the frequency of the affection of the pericardium." We are glad to see this testimony paid to the talents and observation of our learned colleague, by a foreign writer.

Dr. Brown's monograph, of the Diseases of the Heart, is, by far, the most interesting part of his work, and his stethoscopic indications, of the various forms of derangement of organization and function, are lucid, and well-arranged. It will well repay a careful perusal.

R. E. G.

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6. *Laws of Physiology, translated from the Italian of IL SIGNOR DOTT, B. MOJON, Professor Emeritus in the Royal University of Genoa, and Member of many Learned Bodies; with Additions, and a Physiological Table of Man.* Dedicated by permission to SIR ASTLEY PASTON COOPER, Bart. F. R. S. Surgeon to the King. By GEORGE R. SKENE, Member of the Royal College of Surgeons in London. London, 1827, 8vo. pp. 121.

The character of Mojon's *Laws of Physiology* has been for some time established, as a satisfactory digest from the experiments and systematic works of the most approved physiologists of all countries. They may be read with advantage by all who desire to obtain in a condensed form, the results of the actual condition of physiological knowledge. We have not had an opportunity of comparing the translation with the original, but should infer that it has been fairly rendered into English.

To Mr. Skene we cheerfully give the credit of activity and zeal, combined with a spirit of inquiry, which, under proper guidance, may lead him to high honours. We have not room nor inclination at present to examine his particular theories in detail, though the impression we have derived from them is, that they are more strongly characterized by novelty, than by legitimacy of deduction from premises. However, we would encourage him to pursue his researches with steadiness, and endeavour to acquire that solid fame which is the certain result of a zealous application of philosophy to the study of nature.

His dedication to Sir A. Cooper is strikingly neat, well adapted, and tersely expressed, and might serve as a model to some of our American brethren, who, even in this land of intellectual independence, occasionally produce dedications unrivalled for nauseous adulation and servility.

J. D. G.

7. *A Manual of the Anatomy, Physiology, and Diseases of the Eye and its Appendages.* By S. J. STRATFORD, Member of the Royal College of Surgeons in London, Surgeon to the Dispensary for Diseases of the Eye, and late Senior Assistant-Surgeon to the 72d, or Duke of Albany's own Highlanders. London, 1828. pp. 199, 8vo, with a plate.

Much attention has been given in Great Britain, within the last few years, to the diseases of the eye, and these affections, so long abandoned by the profession, are now considered as constituting a branch of surgery, with which every regular surgeon should be conversant. This beneficial change is in part owing to the pathological researches of Wardrop, still more to the zeal and efforts of the late Mr. Saunders, and perhaps above all to the ravages produced by the puriform inflammation of the conjunctiva among the army, whilst in Egypt and subsequently to its return, and which attracted the especial attention of the army surgeons to this formidable disease, and the various derangements of the organ of vision in which it resulted; and it is to the surgeons of the English army that we are indebted for many improvements in our knowledge of the pathology and mode of treatment of the diseases under notice, and for some very interesting tracts on these subjects.

Most of these treatises, however, are limited to the consideration of a single disease, or a new operation or method of cure. Mr. Stratford has undertaken a more extensive work, and has presented us with "a Manual of the Anatomy, Physiology, and Diseases of the Eye and its Appendages." He commences with an anatomical description of the orbits, the appendages, and of the eye-ball; he next offers a few general considerations on the diseases of the eye and its appendages; and then treats in succession of the diseases of the conjunctiva, lachrymal gland, lachrymal passages, eyelids, orbits, of the sclerotic coat, cornea, iris, choroid coat, and ciliary processes, of the retina, membrane of the aqueous humour, the lens and its capsule; and the general diseases of the eye-ball, as glaucoma, fungus hæmatodes, &c. and concludes with an account of the effects of injuries of the eye and its appendages, and their treatment. Most of the subjects interesting to the ophthalmologist, are, it will be perceived, brought under notice.

If the work of Mr. Stratford will not supply the want, so long felt, of a complete system of ophthalmic medicine and surgery, it at least has the merit of being the best compend or manual that has hitherto been presented to the profession. His descriptions of diseases are concise and accurate, his pathology almost always correct, the treatment he recommends such as would naturally be suggested by a correct pathology, and is that which has been sanctioned by the experience of the best practitioners. We congratulate the student on the valuable acquisition that this book will be to him.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Anomalies in the Anatomy of the Kidneys.*—Dr. BOULLAUD has met in one subject with only one kidney, which was situated across the spine, and was furnished with two ureters; it was considerably larger than the ordinary size.

Dr. B. has found the kidneys lobulated in four adult bodies. The external configuration of the kidneys resembled in some degree the hemispheres of the cerebrum. The lobes and sinuosities representing the circunvolutions and inflexions of the brain. In one instance two ureters proceeded from the right kidney, and at the termination of about two inches they united into one canal. The left kidney was naturally formed.—*Journal Complementary, July, 1828.*

2. *Rare and Remarkable Anomaly of the Vascular System.*—This case was met with by Professor FRANCHE, and is related in the *Zeitschr. für natur-und Heilk.* for 1827. The aorta was in its natural position, but the vena cava ascendens did not lie on the *right* side of the former vessel; it, on the contrary, ascended over the fourth, third, and second lumbar vertebræ, on the *left* side of the aorta; opposite to the first lumbar vertebra, the vein crossed in front of the artery, immediately below the superior mesenteric. Having arrived on the right side of the aorta, the vein continued to ascend, as usual, towards the liver and diaphragm. At the point where the vena cava is formed by the union of the two iliacs, and where the aorta bifurcates, the iliac veins were for the most part covered by the iliac arteries, but the former were rather more to the *left* than the latter, corresponding thus with the anomaly of the principal trunks. The aorta was in this manner quite embraced by the vena cava opposite to the lumbar portion of the vertebral column. The only similar case on record, we believe, is that noticed by Morgagni, *De Sed. et Caus. Morb. Lib. IV.*

3. *Insertion of the Umbilical Vein in the right Auricle of the Heart.* By Professor MENDE.—The child who formed the subject of this case died immediately after its birth without any known cause. It did not show any anomalous appearance externally, but the vessels having been injected, a remarkable anomaly was discovered in the disposition of the umbilical vessels. The umbilical vein, instead of dividing into two branches to traverse the liver, continued in the form of one trunk, and ascended over the convex surface of the right lobe of that organ to the right auricle of the heart, where it terminated before and above the mouth of the inferior cava. The heart appeared to be pulled down by this insertion of the umbilical vein; its base was much inclined towards the right and towards the sternum; its position was, consequently, more transverse than ordinary. A single umbilical artery arose from the abdominal aorta, at its bifurcation, between the primitive iliacs; it passed on the left side of the urinary bladder, and continued its course to the um-

bilicus. No other anomaly was discovered in the abdominal, or the thoracic viscera.—*Bulletin des Sc. Méd. May, 1828, from the Nova Acta Phys. Med. Acad. C.L.C. Nat. Curios. Tom. III. 1827.*

4. *Metallic Mercury found in the Human Body.*—In Vol. II. p. 227, we mentioned that metallic mercury had been found in the human body by some French chemists. It appears from *Schweigger's Jahrbücher der Physik und Chemie, Tome xx.* that Professor HUNNELAND, of Greifswald, has found it in the semi-liquid fat of a wen.

5. *Instance in which the Kidney was situated in the Pelvis.* By Professor HEUSINGER.—The woman in whom this malformation was found, was aged twenty-three years and died of apoplexy. The right kidney was in its natural situation as also the renal capsule of the left side. The left kidney, on the contrary, was situated in the pelvis, in front of the left half of the sacrum, behind the uterus, to the left of the rectum, which was pushed towards the right, and was in part before the sacro-iliac symphysis of the right side. The shape of the left kidney was almost circular; its greatest diameter three inches six lines, its smallest three inches.

6. *Anatomical Description of the Anastomosis between the Glosso-pharyngian, the Trifacial and Trisplanchnique Nerves.*—Dr. JACOBSON has inserted in the *Répert. d'Anat. et de Phys. Vol. II.* a description of this anastomosis; the following are the conclusions of this learned Danish anatomist. 1st. There exists an anastomosis between the glosso-pharyngian, the superior maxillary and the grand sympathetic nerves; 2d, this anastomosis is constant in man and in a great number of mammiferous animals; 3d, this anastomosis in its structure and its course exhibits much analogy to the corda tympani.—*Bull. des Sci. Méd. Aug. 1828.*

PHYSIOLOGY.

7. *State of the Heart during Pregnancy.*—It is asserted by M. LARCHER, in a paper in the *Archives Générales*, that in pregnant women the left ventricle becomes thicker, more firm, redder, and more active than natural. This hypertrophy, he says, whether the cause or the effect of plethora, always imparts an energy to the circulation, which accounts for the vascular symptoms of pregnancy.

8. *Cyst near the Parotid Gland, containing a Fœtus.*—Professor RENNER, of Jena, relates in the *Zeitschr. für die Organ. Physick. for Sept. 1827*, his having found in a cow which died of hectic fever, a cyst two inches in length at its greatest diameter, under the skin, behind the parotid gland, which contained the bones of a fœtus.—*Bull. des Sc. Méd. June, 1828.*

9. *Instance of Gradual Abolition of all the Senses in succession, the Intellectual Faculties remaining Entire.* By M. DE FERMON.—M. C. J. a Corsican, allied to the family of Napoleon, of a nervous temperament, rich, a wit, a lover of the fine arts, and a devotee of pleasure, which had been indulged in to excess, was attacked with difficulty of vision, which soon terminated in complete amaurosis. Having suffered in his youth from syphilis, he was put on a course of mercury, without any benefit. Afterwards he tried numerous remedies under the best physicians in France, but to no purpose. Notwithstanding this blindness, he continued to fulfil his functions as financier, and acquired such a tact that he could distinguish engravings on copper from wood-cuts, lithographs, &c. by the fingers alone. In short, he enjoyed society nearly as much as ever, and hardly felt the loss of

sight. But in a few years he began to grow deaf of one ear—then of the other, and in a short time, he had to add the total loss of hearing to that of sight! By means of large moveable types or letters, which his family put together, he was soon able to read with his fingers whatever was wished to be communicated, and by this contrivance he still held free intercourse with the external world. All his intellectual faculties remained unimpaired, and his memory was extremely tenacious. But new misfortunes were in store. Muscular motion and sensibility began to fail, and, in a short time, they were completely extinct! He was now, as it were, exiled from the earth, in the midst of his family and friends! He could speak; but no answer, no sign, no impression could he receive through any channel of sense! In this deplorable condition, it was accidentally discovered that a small portion of one of his cheeks retained its sensibility, and the active imagination of the sufferer soon took advantage of the discovery. He caused one of his sons to trace letters on his cheeks as he dictated them, and by constant repetition he was soon able to recognise these letters as traced on the sensible part. He made such progress, that, in a few days, his son wrote on his father's cheek the speech of the king of France, on his return in 1815, the whole of which was completely understood! With this sole solace of a dreary death in life, he dragged out some time in a state of the greatest misery that can well be imagined—his intellectual faculties not appearing to suffer the slightest degree of decay. At length the unfortunate patient became enfeebled, the fecal matters escaped involuntarily, and after many years of suffering he succumbed. No autopsic examination was made.—*Bulletin des Sciences Médicales*, Jan. 1828.

10. *On the Coagulation of the Blood*.—Dr. JOHN DAVY relates a number of interesting experiments on this subject in the *Edinburgh Medical and Surgical Journal*, for October, 1828. The following are his conclusions. 1st, The coagulation of the blood takes place independent of motion, and it is very little affected by motion, whether violent or moderate; 2dly, That it is not caused by the action of atmospheric air, or much affected by any kind of air that is not absorbable in water; 3dly, That it is not retarded by the introduction and absorption of carbonic acid gas; and lastly, That the action of reagents on the blood, or the fibrin of the blood, as regards coagulation, is exceedingly various, not to be anticipated *a priori*, and inexplicable on any one hypothesis hitherto advanced, the effect of each of them requiring special consideration, and further and minute experimental enquiry for its elucidation.

11. *Perspiration after Death*.—At a meeting of the Royal Academy of Medicine in August last, the secretary read a case which came under the observation of M. SPERANZA, clinical professor at Parma. The subject was a woman of Mantua, who died on the fourth day after an attack of encephalitis. Examined twelve hours after death, the body was still warm and covered with a profuse perspiration, which, as often as it was wiped off, returned again. This phenomenon continued during twenty-four hours. M. Fontaneille, by whom the case was addressed to the academy, suggests in explanation of this occurrence, that the cutaneous capillary vessels still retained a remnant of the vitality proper to them after the cessation of general vitality.—*Archives Générales*, Sept. 1828.

12. *On the Condition of the Blood and Blood-vessels in Inflammation*.—Dr. KALTENBRENNER has recently published some interesting experiments which he instituted on these subjects. The successive changes which, by means of the microscope, he observed to take place in an organ at the moment of its being deprived of life, were the following:—On the approach of death, the column of blood in the arteries gradually diminishes in size, till, at last, the vessels contain only half of the usual quantity; the stream is uninterrupted, rapid, and without any visible pulsations, which, however, may be observed after some time, corresponding with those of the heart, and gradually becoming more and

more distinct; at last, however, they become unequal and indistinct, and, at the same time, the column of blood decreases, till it disappears entirely; the arteries are now quite empty, and organic life is extinct. Whilst the arterial stream is uninterrupted, no disturbance is observed in the veins; but as soon as the arterial circulation becomes unequal and irregular, the blood is accumulated in the veins; and from the moment that no more blood is carried into them, that which they contain stagnates entirely, retaining, however, for some time, an undulatory motion, passing into the branches, and then returning again; these undulations gradually diminish, and become reduced to smaller limits; the globules of the blood are conglomerated, all spontaneous motion ceases, and the mechanical laws determine its further direction. This undulation of the venous blood is observed, not only in dying animals, but also in parts divided from the living body, and in those which, by a very tight ligature, have been separated from the system. In these cases, the arteries are emptied as soon as they receive no more blood; the fluid of the capillary vessels, from this moment, is thrown into undulations, which press the blood towards the veins, and, lastly, terminates in complete stagnation. This fact is a decisive proof, that the motion of the blood in the smaller arteries, and especially in the capillary system and veins, is, in some degree, independent of the action of the heart.

It is a general opinion, that after death the blood is equally distributed to all the organs of the body, unless any of them had been the seat of inflammation; this is not the case: in the extremities, the serous membranes, the lungs, &c. the blood retires from the capillary system into the larger veins; in other organs, as, for instance, in the spleen and liver, the capillary vessels do not completely empty themselves. It is very interesting to observe, that in fishes, the blood of the smaller vessels is not emptied into the veins, but that, from the moment when the circulation is arrested, it is infiltrated into the cellular tissue, where it is found in reddish masses; a fact, which can only be accounted for, by assuming that these small vessels are canals without proper parietes. In the liver of the frog, the same appears to take place, but not in that of the rabbit, which, after death, is found most beautifully injected.

In the spleen, the small vessels undergo a very singular change at the moment of death. During life, the distribution of the vessels in this organ is very similar to that in the substance of the liver; after death, the same phenomenon takes place as in the capillary system of fishes; the smaller arteries and veins, and the capillary vessels, emit their blood into the cellular tissue, where it is found in red masses; the larger arteries and veins only retain their blood, of which, in the smaller vessels, no trace can be discovered; this accounts for the general opinion that, in the spleen, the arterial blood is poured into cells, from which it is taken up by the veins; at the same time, it explains why all attempts to inject the arteries of the spleen from the veins have failed. Whoever examines the edges of the spleen of the mouse under a microscope, will be convinced that after death the blood of the capillary system is infiltrated into the parenchymatous tissue, but he will never, during life, observe its emission into cells.

On examining, after death, the mucous membrane of the small intestines, it appears, even to the naked eye, that a small portion of the blood is retained in the capillary vessels, the rest being carried into the larger veins.

The changes which the circulation of inflamed parts undergoes after death, is very different from those observable in healthy organs. The blood is conveyed from all parts with accelerated motion, towards the centre of inflammation; the arterial is not changed into venous blood, and its coagulatory power is much increased. If in this state death takes place, the column of blood in the surrounding vessels diminishes in size, and the blood accumulates in the inflamed part, so that at last the peripheric vessels are perfectly emptied; at this moment the circulation ceases, but for a considerable time afterwards undulations are visible, by which the blood is gradually carried towards the centre of inflammation, and which insensibly terminate in stagnation. This motion, subsequent to the death of the animal, is also observed in the newly-formed

vessels. In a lesser degree of inflammation, the blood is only accelerated in its motion, and does not approach to a complete stasis; the centripetal undulations are also visible, but ultimately the blood is carried into the veins. In such cases the inflamed parts exhibit hardly any redness after death.

It appears, that in some organs, inflammation is more disposed to form the inflammatory centres described above, than in others; in the latter division, to which the serous membranes seem especially to belong, exudation is most frequently observed. If cold water is injected into the peritoneal cavity, inflammation is soon excited, and quickly followed by exudation; the afflux of blood is so violent, as to make the membrane appear like a net-work of injected vessels; from the moment that life ceases, the blood gradually leaves them, and is completely poured into the veins, so that, after death, but very slight traces of the preceding inflammation can be perceived.

The abdomen of an animal being opened, or its intestines and mesentery being drawn out, the contact of atmospheric air soon causes inflammation, which increases very rapidly in the mesentery, but slowly in the intestines. When, however, it has arrived at a certain pitch in the latter, it suddenly diminishes in the former, and gradually subsides, till at last its vessels are emptied, and the inflammation is confined to the intestines alone. The same phenomenon takes place if the mesentery is first irritated, and the intestine is afterwards exposed to any exciting cause. It seems, then, that inflammation is much more readily excited in the serous membranes, than in the organs which they envelope, but that it subsides very rapidly, and in the same proportion as it increases in the intestines. The tissue of the lungs appears also to be little disposed to form inflammatory centres, while in the liver the contrary obtains. The circulation of the latter organ is, even in the state of health, very slow and favourable to considerable accumulation of blood; in inflammation it is first accelerated, but gradually retarded, and lastly, a complete stagnation takes place. The same is observed in inflammation of the spleen.

Violent inflammation of the mucous intestinal membrane, often leaves no traces whatever; the blood with which, during life, the capillary vessels were gorged, is, after death, so completely conveyed into the veins, as to render this membrane almost as pale as in its healthy state; this is even most striking in the most acute inflammation, so that, in this respect, the mucous are apparently very similar to the serous membranes.

When the capillary vessels are wounded, scarcely any extravasation appears to take place, only a few globules escape, and the circulation through the wounded vessels is not at all disturbed, but continues as before. If very small arteries are divided, the hæmorrhage is also very trifling; but the blood ceases to circulate through the wounded vessels, and passes entirely into the arterial branch next above the division. When a larger artery is divided, a considerable hæmorrhage ensues from the two ends, and the blood of the neighbouring arteries is seen moving towards the wound as towards a centre; after some time, an undulatory motion is observed in the ends of the arteries, so that, at one moment, the blood moves towards the point of division, and, in the next, returns into the vessel; these undulations gradually decrease, till the movement of the blood, towards the divided extremities, ceases entirely, the blood being carried through the next arterial branches.

PATHOLOGY.

13. *Case of Rupture of the Right Auricle of the Heart.* By R. RUTHERFORD, Esq. Surgeon.—A woman aged twenty-four years, who had been four years before subject to *deep mental inquietude*, since when she has suffered frequently from palpitation of the heart, her lips becoming at such times purple, and her whole countenance assuming a cadaverous appearance, was attacked, Novem-

ber 10th, 1825, with a fit, which was described as resembling epilepsy; she was incapable at the time of articulation, and felt extremely cold. When seen by Mr. R. she complained of extreme throbbing in the head, and great confusion when she sat up in bed, and vomited on taking any thing into the stomach; pulse hard, frequent, but regular. She was depleted and purged, &c. and was somewhat relieved. On the 14th of November, Mr. R. took from her in a full stream twelve ounces of blood, and her pulse still continuing hard, he let the blood flow till she lost eight or ten ounces more. "The pulse still continued hard and frequent, but she said she was relieved. She did not show the slightest disposition to faint after the bleeding, but on lying down she suddenly exclaimed, 'Oh dear, my heart! it will certainly burst: my feet feel so strange, they are quite dead: pray, put your hand on my heart, sir, it will come out.' I went immediately round to her head-side, when she expired in my arms in a state similar to fainting.

"On examining the body, the viscera in general were found to be in a healthy state: there were slight adhesions of the lungs to the pleura; but the pericardium was much thickened, as if from previous inflammatory action, and distended. On opening it, a mass of dark coagulated blood presented itself, the heart being completely buried beneath its surface; on the inspection of which, we discovered that the right auricle was ruptured near the superior cava: its parietes were particularly thin and flaccid."—*Journal of Morbid Anatomy, &c. Vol. I. Part I.*

14. *Case of Rupture of the Left Ventricle of the Heart.* By JOHN ADAMS, Esq. Surgeon.—A stout man, aged forty-six years, temperate habits, for many years subject to great mental anxiety, in consequence of the misconduct of a near relative, was attacked, November 5th, whilst walking home, with a sense of weight and tightness on the left side of the chest. Nov. 8th. After passing a night of great mental distress, aggravated by having to perform a very painful task, he had a return of the sensations of weight, &c. which had hitherto only been felt during exertion; his breathing was interrupted under exertion; pulse 85, full, but easily compressed. He was purged, and in the evening took a dose of laudanum. Nov. 9, "had passed a night of great *agony*, both of body and mind: the pain in the region of the heart very severe, and extending along each arm, particularly the left; his pulse 130, full, and firm; tongue white and dry; countenance exceedingly anxious, and pale. Venæ sectio ad $\frac{3}{4}$ xiv. He became faint during the bleeding, and vomited: somewhat relieved for a few moments, but as soon as the faintness went off, the pain, tightness, &c. returned as severe as before, the bowels not having acted since last evening, ordered hydr. subm. gr. vi. c. haust. rhei. His symptoms continued with unabated violence until half past one, when having raised himself on his left arm, to turn to his right side, he fell back in bed, and expired after a short but violent struggle.

"*Morbid Appearances.*—On opening the thorax, the pericardium appeared to be distended, and emitted, when divided, a quantity of serous fluid; but the heart was entirely concealed by an envelope of coagulated blood, which presented so imposing an appearance, that I stood for some minutes surveying it before I could proceed with the examination. The coagula were separated into three distinct layers. The removal of the first, which had a foliated appearance, exposed only the apex of the heart, the second a larger surface of that organ, but the third uncovered its lesion, which extended into the left ventricle, between the carneæ columnæ, close to the septum ventriculorum, and nearer to the apex than the base of the heart."—*Ibid.*

15. *Notes of Two Cases of Rupture of the Left Ventricle of the Heart.* By JOHN CROSS, Esq. Surgeon.—"I. A maiden lady, aged seventy-three, jolly, and having rosy cheeks, was in a violent passion one Sunday, and for a week afterwards complained of *pain* in the region of the heart, and a *shortness of breathing*, but went about till the expiration of that time, when she sent for me in

the evening. She was suffering so little from *these symptoms* as to debate about going out to dinner the next day. She passed a restless night, but was in the sitting room in the morning, and kept about till night, when she was unable to lie down in bed, and sat up with the hand applied to the region of the heart, on account of pain there. She expired before morning. Four ounces of coagulated blood were found in the pericardium. The heart is not enlarged, nor does it present any morbid appearances; the great vessels proceeding from it are equally healthy and well-shaped. The rupture of the left ventricle is in the anterior part of the heart, very near the septum of the ventricles, and one inch and a half from the apex. There is an irregular rent in the external serous covering of the heart, and in a few of the superficial muscular fibres, of half an inch in length, but deeper than this; the slit is not more than *one-eighth of an inch*, this being what we very properly consider the dimensions of the opening into the ventricle.

“II. The subject was an active old gentleman, with very florid cheeks, above seventy years of age, and whom I had complimented on his health and cheerfulness forty-eight hours before his death. He was exerting himself at a public meeting; whilst standing, he entered warmly into a debate, tottered, fell, and was found to be dead. Between seven and eight ounces of blood were found in the pericardium. The heart was very considerably enlarged, owing, no doubt, to the morbid state of some of the large vessels proceeding from the arch of the aorta; for the arteria innominata, just at its origin, was so diminished in its tube, by atheromatous deposition between its coats, as to leave a passage not more than one-eighth of an inch in diameter; and the left subclavian artery was similarly diseased and diminished one-half in its calibre. The rupture of the left ventricle is situated two inches from the apex, in the left wall of the ventricle, opposite to the septum of the ventricles; the whole thickness of the ventricle, (which is at this spot about one-third of an inch,) is opened by a slit, half an inch in length; but the rent in the outer membrane of the heart, and in some of the superficial muscular fibres, is above an inch long. These two cases contrast well, in the difference of time between the immediate cause of the injury and its fatal result, the bulk of the organ, and the state of the large vessels.”—*Ibid.*

16. *Case of Rupture of the Left Ventricle of the Heart.* By G. H. WATSON, Esq.—A man, æt. 61, full habit, short stature, was prevented from sleeping for two or three nights, owing to a violent pain in his chest; pulse 75–80, regular. These symptoms abated on the fifth or sixth day, but they then suddenly returned and terminated the existence of the patient. On examination, a small, unequal, and apparently torn orifice appeared in the anterior portion of the left ventricle, through which the blood had passed into the pericardium. “The inner surface of the ventricle was deeply red for one or two lines from the orifice, forming an inflamed zone round it; one or two of the *carneæ columnæ* were separated from their attachments to the heart towards the apex, and their separated points bore the appearance of ulceration having been the cause of this lesion. The internal surface of the aorta, about an inch and a half above the semilunar valves, was very red; the heart was also very fat.” Nothing else remarkable was observed—*Ibid.*

17. *Case of Angina Pectoris, and Ossified Cerebral Arteries.* By J. LEWIS, Esq. Surgeon.—A robust, muscular, and healthy man, aged sixty-seven, died suddenly, October 30th, 1826. Twice in the morning of that day, and once in the evening, just before he expired, he complained of a severe pain shooting across the bottom of his thorax, and darting to the middle of the upper right arm. *Dissection.*—Head. Dura mater thicker, and more dense than natural; brain unusually soft; right ventricle containing from “ten to fourteen drachms of perfectly clear serum, and the left from six to eight drachms of the like colourless fluid. The arteries at the base of the skull, particularly the vertebral and basi-

lary, were ossified in patches. The cerebellum appeared healthy, with the exception of being softened. Upon removing the cerebrum and cerebellum, there was found at the basis of the cranium between one and two ounces of bloody serum. Upon making sections of the cerebrum and cerebellum in various directions, there was no appearance of rupture or extravasation. Thorax. The left lung was distended with air, and adhered to the pleura universally. The right lung was healthy, and not adherent. The heart was very large, and fat, filling the pericardium; the coronary arteries were much ossified, but there was no other diseased appearance. Abdomen. The spleen adhered to the peritoneum, and was so tender that it broke down upon being detached. Some portions of the small intestines also adhered to the peritoneum. The abdomen and chest were covered with fat to the depth of two or three inches."

For a short time previous to his death he had been very forgetful, and his ideas were at times rather confused, and occasionally he would talk incoherently.—*Ibid.*

18. *Case of Chronic Inflammation and Partial Ossification of the Coronary and Vertebral Arteries, producing Angina Pectoris.* By H. J. GORE, Esq. Surgeon.—A man, æt. 57, middle size, muscular, had for some years past been subject to attacks of extreme difficulty of breathing, pain in the chest, and violent cough; which symptoms came on suddenly whilst he was engaged in any exercise, even walking at a moderate pace, ascending stairs, or performing any other motion that accelerated respiration. The horizontal posture could not be endured, bringing on dyspnoea and coughing; he always reclined with his shoulders raised. Whilst conversing, he fell, and instantly expired without the slightest struggle.

Dissection.—"Brain. The ventricles contained four or five ounces of fluid. The vertebral arteries were unequally enlarged, and partially ossified. In other respects, the brain and its membranes were sound. The abdominal viscera were healthy. Thoracic viscera. The lungs were perfectly healthy, but very much gorged with blood, even the upper surfaces appearing nearly black. There was considerable, but not recent adhesion of the lungs to the pleura costalis. The pericardium was healthy, but contained about two ounces of fluid. The coronary arteries were inflamed, and partially ossified."—*Ibid.*

19. *Case of Rupture of an Aneurism of the left Vertebral Artery.* By H. J. GORE.—The subject of this was a tall, muscular man, æt. 24, accustomed to drink spirits. October 20th, 1826, he was excessively drowsy, for which he had leeches applied to the temples, and took an aperient. This relieved him, and the next day he said he was quite well. In the evening, directly after going to bed, he suddenly became insensible, respiration laborious, and he immediately expired.

Examination, sixteen hours after Death.—"The membranes of the brain were much charged with venous blood. The substance of the brain was particularly soft, and had a peculiar yellowish-brown appearance. The ventricles contained about six ounces of water and a small quantity of coagulated blood, (about two drachms in each.) The plexus choroides was nearly white. At the base of the brain, there were about four ounces of coagulated blood, which had escaped from a small aneurism of the left vertebral artery, just before its junction with the right to form the basiliary. Both vertebral arteries were in a diseased state, their tunics being much thickened in parts for about three-quarters of an inch in length, and several rings of a cartilaginous substance being deposited between them; but the basiliary and carotids were healthy."—*Ibid.*

20. *Excessive Dilatation of the Aorta, and very Enlarged state of the Heart.* By D. PRICE, Esq. Surgeon.—CASE I. This patient, during the four years that he was under the care of Mr. P. ate well, slept well, had a tranquil pulse, cool skin, clean tongue, and his evacuations were healthy and natural in appearance, but he was always complaining of illness. He was always imagining that he was going to fall down, when he either walked, stood still, or rode in a carriage; but on horseback the sensation never annoyed him. Bleeding, purging, &c. were em-

ployed, but he counteracted the effects of all remedies by indulging his appetite, which was voracious. About eighteen months before his death, it became apparent that there was an unnatural condition of his heart or aorta. "From this period, the inconveniences consequent upon such an affection constantly increased, and became ultimately truly distressing. Every time the heart contracted, it struck the ribs with a force that made it audible at some distance, and the blood, as you are aware, could be distinctly heard whizzing through the artery, at the distance at which the practitioner usually places himself from the patient. On examination after death, the heart was found of a magnitude exceeding all belief. Its parietes resembled in *thickness* the heart of an ox more than that of a human being. The coronary vessels were very large, particularly the veins, which were gorged with blood. The ascending aorta was so much enlarged that the valves could not at all approximate to each other, and their function must consequently have been for some time very imperfect. There was, as might be expected, a larger quantity of fluid in the pericardium than usual, and also some effusion into the cavity of the pleura: all the other organs were in a healthy condition."

The patient "though short in stature, had a very capacious chest, and had been much noted as a wrestler, and also for extraordinary speed in running."

CASE II.—This patient had suffered from affection of the heart, upwards of ten years. Becoming violently agitated from fright, vomiting came on, which continued until his death, which took place in a few minutes. On dissection, the heart "appeared *pale* and *flabby*, and enormously enlarged. It measured from the base to the apex, eight inches and a half, and it was of a corresponding breadth. The semilunar valves had been, no doubt, in an useless condition for years, (verifying Sir Astley Cooper's opinion,) the ascending aorta was covered with large flakes of ossific matter, which protected and completely united it to the adjoining ribs. The coats of the artery had not, as I imagined, been converted into an aneurismal pouch; on the contrary, I found the dilatation of the vessel uniform throughout its extent. There were many patches of bone also on the descending aorta, and its calibre was greatly increased."—*Ibid.*

21. *On the Diseases of the Kidneys and Ureters.* By J. BOVILLAUD, M. D.—Dr. B. has frequently met with *hypertrophy of the kidneys*, it generally occurs only in one of these organs. It is recognised, according to Dr. B. by the following appearances. The kidney is a quarter, or a third, or perhaps even one-half, larger than the natural size. Its substance is firmer, more compact, and redder. It is probable that in such cases the renal artery is enlarged, although this fact has not been determined. Hypertrophy of the kidney occurs under the influence of various causes, which determine to it an unusual quantity of blood. The most likely circumstance to produce this kind of plethora in one kidney, is the existence of some obstruction to the passage of the blood towards the other. It happens, consequently, that hypertrophy of one kidney is frequently detected when the other is in a state of atrophy. Hypertrophy of the heart and of the external muscles, takes place equally under the same conditions which preside over the increased size of the kidney.

Atrophy, or diminished nutrition of the kidneys.—This disease M. B. has frequently seen. Its characters are diametrically opposite to those of hypertrophy of the organ. The size of the kidneys is less than natural; their substance is paler; they contain less blood, and appear shrunk. Whatever cause obstructs the current of blood to the kidneys, may produce an atrophy of them. In every such instance, M. B. has been able to demonstrate a greater or less obstruction to the free circulation of the blood. The pressure of an enlarged spleen has sometimes produced atrophy of the left kidney. The right kidney has been similarly affected by the continued, yet gradual, pressure of an enlarged liver. In other organs, as the heart, the lungs, the breast, the testicle, pressure frequently causes the same diminution of size.

Infiltration of urine, and cysts of the kidneys.—M. B. observes that no patho-

logist has hitherto described this affection; it is not, however, very rare, but it may easily escape the observation of a careless practitioner; the following are the characters of it: on the surface of the kidneys may be seen several round vesicles, which raise the covering membrane of these organs. These vesicles appear to be small cysts in the substance of the kidney, and are probably formed by a certain quantity of urine, which has distended the uriniferous tubes, in consequence of some obstruction to the passage of the fluid. M. B. has seen some of these cysts as large as a cherry. Sometimes, instead of numerous vesicles, he has detached one large sac, which he presumed to have been formed from the union of several smaller ones, of which the parietes had ruptured. He has found the whole of the kidney transformed into one large sac, containing either a transparent serous or turbid fluid.

Inflammation of the kidneys, and of the disorganizations which follow inflammation.—In consequence of their peculiar structure, the kidneys do not easily become the seat of those disorganizations which result from inflammation. Nephritis is marked by the following appearances: redness, tumefaction, presence of pus, softening of the structure of the organ, abscesses, ulceration of the external surface, conversion of the parenchymatous substance into a tuberculous or encephaloid matter, which is, in a great measure, the product of the diseased secretion of the affected kidney. Cysts, either on the surface, or in the substance of the kidney, may result from inflammation. In two or three cases, M. B. has found the kidney converted into a fatty yellowish substance. The symptoms of the various ulcerations which the kidneys occasionally undergo, are very obscure; this circumstance will not be considered so extraordinary when we consider, first, that the deep-seated situation of the kidney embarrasses our examinations; secondly, that derangement of the function of the kidneys produces similar symptoms to those which result from various affections of the bladder and ureters; thirdly, that pain is by no means a constant attendant upon renal disease. If we are to rely upon the statement of most pathologists, acute pain is the almost inseparable attendant upon inflammation of the kidneys; it is not denied that such is frequently the case, but M. B. affirms that he has observed the most decided marks of renal inflammation in the bodies of patients, who had never complained of pain in the region of the kidneys. This absence of pain may be more easily conceived, when we reflect that the kidneys in a natural state are but slightly sensible. Violent pain is not seldom complained of in the region of the kidneys, when no disease of them is to be detected. The presence of a certain quantity of blood or pus in the urine, when there exists no disease of the bladder, is a symptom of some affection of the kidney; when to this symptom is united a smart attack of fever, the existence of nephritis may be strongly presumed. At the commencement of the disease, if both kidneys are affected, an almost total suppression of urine takes place. Chronic nephritis, like most other internal inflammations of a chronic character, produces a slow fever, which destroys the patient by throwing him into that state termed renal consumption. When the affected kidney continues the performance of its functions, the urine is much altered in its appearance, but sometimes it ceases to secrete; the urine being formed only by the healthy kidney, presents no unusual appearance, and the diagnosis of the disease is then extremely difficult. If both kidneys are simultaneously disorganised, so that a total cessation of the secretion of urine takes place, the same phenomena will occur as we observe in animals in which both ureters are tied, or both kidneys removed: violent fevers quickly arise, and a strong smell of urine is exhaled from the body. Is hypertrophy of the kidneys ever the cause of diabetes? M. B. is not furnished with sufficient facts to justify him in giving a positive answer to this question, but he has observed hypertrophy of the kidneys where the patient had been affected with diabetes. The ureters, like all other parts of the body, may suffer from inflammation, and undergo various alterations of structure in consequence; their canals may be much enlarged, diminished, or entirely obliterated; dilatation of the ureter may arise from any cause which obstructs the free passage of the urine into the blad-

der; contraction or obliteration may follow from any accidental compression from inflammation of the internal membrane which lines the cavity, or from the cessation of the passage of the urine through the canal, from the function of the kidney being no longer performed in consequence of disease. The symptoms of affections of the ureters are as obscure as those which attend diseases of the kidneys. If both canals are obliterated at the same time, death would speedily result; but if one ureter only is obstructed, the calibre of the other will be increased considerably, from the additional duty which it will have to perform under such circumstances. In support of these observations, M. Bouillaud details several interesting cases.—*Journal Complementary, July, 1828.*

22. *On the Anatomical Characters of Tumours, designated by the names of lipoma and steatoma.* By A. N. GENDRIN, M. D.—Dr. Gendrin has published in his *Journal* for May last, a very interesting memoir on this subject. The following are his conclusions; 1st. Lipoma's are evidently adipose tumours, as has been known since the time of Littre, who first described them. 2d. The structure of the adipose tissue of these tumours, differs a little from that in normal fatty accumulations, and in local polysarcoma. 3d. That lipoma's although implanted in the subcutaneous cellular tissue, have an independent life, since they receive vessels which have a special distribution, and which are isolated from the adjacent parts by a bed of cellular tissue, not adipose. 4th. That lipoma's being thus accidental adipose organs, have, in their own organization, all the principles of their development and of their growth, which is sometimes very rapid. 5th. Finally, that their complete extirpation is the only means of cure; that it can be performed without any other danger than that necessary from the incisions, and that it will always be followed by a radical cure, when the incisions are limited to the cellular bed which isolates these tumours.

Steatomas present themselves in two distinct states: 1st. Imperfect. 2d. Degenerated or softened. The following are M. Gendrin's conclusions respecting them. 1st. That steatoma's differ essentially from lipoma's even in their external characters. 2d. That steatomatous tissue constitutes, like scirrhus and the encephaloide tissue, one of the forms of cancerous affections. It can be developed in all the organs; it is not in the form of wen, (loupe,) that it is most frequently seen. 3d. The steatomatous tissue has in its state of imperfection, in its state of softening, and in its state of ulceration, some characters which distinguish it from other carcinomatous tissues. 4th. It is still, however, a form of carcinoma, since it coincides with the other varieties, and even presents on the lips ulcerations which only affect the surface, and with which it is observed that individuals from whom steatomas have been extirpated, are liable to be attacked. Sometimes they are even simultaneously affected with carcinomas, under the form of scirrhus, encephaloide, or ulcerated steatoma, either in the same situation, or in different organs, as takes place in those from whom true scirrhus has been extirpated. 5th. Undeveloped steatoma is susceptible of cicatrizing, when it has been wounded with a cutting instrument, though it still continues to advance. 6th. That it is possible, and even proper, to remove a portion of a steatoma which is deeply situated, and which cannot be entirely extirpated, in order to relieve the patient from the effect of the sanies and carcinomatous ulceration which occurs at its surface; but the amputation must be performed in the undeveloped portion of the tumour.

Mr. G. offers the following general conclusions. 1st. That the distinction between lipoma and steatoma is founded on well marked semeiological and anatomical characters. 2d. That particular attention must be paid to the disposition and extent of the roots of noncysted wens, before extirpation is attempted. 3d. That these wens are accidental organs, which have a peculiar organization, entirely different from that of the other tissues; hence their development can never be explained in a satisfactory manner by the anormal or morbid development of the part or parts in which they are situated.

23. *Amnesia*.—In our original department we have inserted a very interesting case of amnesia by Dr. JACKSON; a case of the same disease has been recently met with by Dr. CHAILLY, and is related in the *Archives G n rale*, for 1828. A man aged fifty-seven, whilst playing at *tric-trac* in a warm room, felt a sudden pain in his left temple, and at the same moment lost the power of expressing his thoughts. His memory betrayed him every time he attempted to use a substantive word; all words of that kind being replaced by *sonnez* and *six-cinq*, terms used in the game he had been playing. When Dr. C. saw him, his face was flushed, and he complained by gestures, of pain in the left temple, but was unable to say further than *Pai l  un sonnez*. Every thing was *sonnez* or *six-cinq* with him.

By the use of copious bleeding, general and local, and revulsives, he was entirely restored.

24. *Case of Rupture of the Bladder, with separation of the Symphysis Pubis*.—“A stout, powerful man,  tat 35, was brought to the Worcester Infirmary, on the 5th of June, in the evening, having met with an accident, from a colt rearing up and falling upon him, about three hours before. His face was pallid and distressed; pulse very feeble. He complained of great pain about the left hip, particularly on motion. He had not passed any urine since the accident, or for three hours before. The person who brought him said that at the time of the accident he was intoxicated.

“A gum catheter was passed, and left in the bladder; about a pint of bloody urine was drawn off. He was ordered half an ounce of brandy every two hours.

“June 6th.—The pulse had got up. There was very extensive ecchymosis over the pubes and both groins; great tenderness and tension over the abdomen; no stool; vomiting very frequent.

“Applr. Hirud. xxx. abdom.—R. Hyd. Submur. gr. x.—Pulv. Jalap. gr. x. fiat. bol. j. stat. sum.—Mist. Cath. quartis horis.—Adhib. Enema vespere.

“7th.—Vomiting continues of dark-coloured matter; pulse hardly perceptible; intellect clear; no stool; urine flows through the catheter. Tension and tenderness of the abdomen increased.

“8th.—Died this morning.

“*Sectio cadaveris*.—Integuments, and the whole of the abdomen below the umbilicus, much contused. The symphysis pubis was separated throughout its whole extent, so as to allow the thumb to be introduced between the bones. The bladder was ruptured transversely through the fundus and peritoneum covering it, to the extent of about four inches. A small quantity of urine, mixed with pus, was discovered in the pelvis. The intestines showed patches of inflammation here and there; and about three inches of the intestinum ilium was quite black, from ecchymosis between its coats.”—*Lond. Med. and Phys. Journ.* Sept. 1828.

25. *Disease of the Stomach, in which a well-defined Perforation takes place in the Tunics of that Organ, without any Softening of their Structure*. By Dr. C. H. EBERMAIER.—CASE I.—A woman, twenty-two years of age, of robust form, sought assistance for ophthalmia, under which she had laboured for several weeks. This affection was speedily subdued. Dr. E. was then informed that for many years the patient had suffered, almost constantly, from a train of symptoms which would hardly have been suspected from her general appearance of good health. The only mark of ill health was a slight paleness of the face. At the age of eighteen she began to menstruate, and, after having continued regular for about a year, the menses ceased, without any evident cause. For some months she continued in good health. At the end of this period, the digestive functions were much disturbed: her stomach ceased to bear her accustomed food; even the lightest aliment produced considerable pain in the stomach, acid eructations, and pains in the pr cordia. These symptoms gradually increased both in duration and severity, and frequently appeared suddenly after the patient had

eaten. Vomiting soon took place some hours after food had been taken; half-digested aliment, mixed with mucus, was thrown from the stomach. The symptoms were not, however, relieved by the stomach being thus freed from its contents. At length the vomiting became almost constant, even after the mildest food, but it was not so violent. The symptoms were not yet, however, so severe as to confine the patient to bed, or to prevent her from following her ordinary occupations, excepting occasionally for a few hours. The nutrition of the body did not appear to be much diminished. So far from this being the case, there were intervals of some months in which the patient enjoyed comparative ease, and during which the spasms of the stomach were so much diminished as to lead to the hope of radically curing a disease which had been considered more distressing than dangerous.

“During the first two years, a great variety of means were had recourse to, without any avail. The whole tribe of antispasmodics and emmenagogues were exhausted in vain. The menstrual discharge did not appear. The imperfect digestion, the vomiting, the dull pain in the region of the *præcordia*, and occasional attacks of fever, continued without diminution. The patient consequently lost all confidence in the power of medicine, and resolved to trust to the efforts of nature alone; which she did during one year.

“It was presumed that the derangement of the stomach was produced by the total suppression of the menstrual discharge.

“Having again submitted herself to the direction of her physician, she was bled in the foot; a mixture of cream of tartar, sulphur, and chamomile infusion was taken; the feet were frequently immersed in warm water; and the lower part of the abdomen was rubbed with stimulating liniments.

“For several months Dr. Ebermaier entirely lost sight of her. He was informed that she was relieved for a short time by the above treatment, but that all the symptoms then returned with their original severity. She was still able to perform her domestic duties, but was incapable of working in the field, on account of the pain she experienced in bending her body. Pressure did not increase the pain she complained of in the epigastrium. She every day carried milk and vegetables the distance of a mile, without inconvenience. The menses had not appeared. Frequently and irregularly spontaneous and easy vomiting took place, two or three hours after she had taken food.

“At the end of about seven weeks she died suddenly, to the astonishment of Dr. E. who had still viewed her malady with little apprehension.

“Until the day of her death she continued lively in spirit, and capable of performing moderate labour. She rose early, took a little bread and coffee, and went into the garden to gather fruit, which she was to carry to market. She was in the act of stooping, when she suddenly screamed out, with great anxiety, “I am dying,” and fell, apparently expiring in the greatest torture. Her hands and feet became cold; she complained of excessive pain in the belly; the thirst was inextinguishable, and her general restlessness and anxiety very distressing. There was now no disposition to vomit. She died in a short time.

“Upon examining the body, a considerable quantity of fluid was found in the abdomen. In the stomach was found a regularly-formed hole, on the anterior part, through which the contents had of course escaped into the abdomen, together with the large quantity of water the patient had taken during the last hours of her existence. Around this aperture there was not the slightest appearance of inflammation, redness, suppuration, ulceration, or erosion, nor any organic lesion whatever. The internal margin of the orifice was perfectly smooth, and the surrounding parts as free from any morbid appearance as the external. The hole, in fact, presented the same appearance as one which would be made in a piece of leather with a punch.

“CASE II.—A man, fifty years of age, of a sanguine and bilious temperament, had complained every two or three months for the last five years, of pains in the belly. He died suddenly. On the right anterior surface of the stomach, a hole about the size of a two-france piece, with callous edges, was found. In the

small intestines were observed several gangrenous spots. It was ascertained that, five years before the commencement of the symptoms under which he had laboured, he had received a severe blow from the pommel of a saddle on the epigastric region.

"*CASE III.*—A girl, fifteen years old, had suffered for two or three years from slight pains in the belly. As her sufferings increased, medical assistance was sought for. She was found to have all the symptoms of enteritis; the face was pale and anxious; urine small in quantity, and of a deep colour; bowels constipated. The patient could assign no cause for the attack. Some years before she had had a similar attack, and since this time she had been occasionally subject to pains in the stomach.—Ten ounces of blood were taken. A clyster with castor-oil was administered, and emollient fomentations applied to the abdomen. She died in half an hour.

"*Appearances post mortem.*—The omentum adhered to the peritoneum, and at different points to the intestines. The abdomen contained a good deal of serous fluid, mixed with coagulable lymph. Throughout the small intestines there were traces of inflammation. The large intestines were also slightly inflamed in different parts, and much distended with air. The liver was smaller and paler than usual. The stomach was empty, and inflamed in different spots. Near the cardiac extremity a circular hole was found, of about nine lines in diameter: its edges were smooth and regular. At the opposite side of the stomach there was another perforation, of an oblong form, but not passing entirely through the external membrane. It appeared as if it had been once completely perforated, but that the orifice had subsequently closed.

"*CASE IV.*—A robust man was attacked with a fixed pain in the epigastrium, accompanied by so distressing a throbbing that he was twice bled. After his meals, he vomited both solid and liquid food. For a long time he confined himself to a very light diet, but without any benefit. For a considerable period he suffered from attacks of fever, the pain and vomiting still continuing. He was frequently bled. He at length threw up a considerable quantity of blood, mingled with pieces of substance, some resembling liver, and others like fragments of the villous coat of the stomach. For about three weeks he went on with occasional variations in the severity of his symptoms, when, after a very severe accession of pain and vomiting, he fell a sacrifice to the disease.

"Upon examination, the abdominal viscera were found swimming in a mixture of oil and other liquids which the patient had taken. The stomach was free from adhesions to any of the surrounding parts, and without any traces of inflammation. On the right and anterior part of the small curvature a round hole was perceived, about six or seven lines in diameter. The interior of the stomach was perfectly free from any traces of inflammation. The internal orifice of the perforation was much larger than the external. The edges, examined with the finger, appeared hard, solid, and of a cartilaginous nature.

"*CASE V.*—A man, twenty-eight years of age, had been frequently troubled, during his youth, with affections of his stomach, which had been attributed to worms. For many years he enjoyed an apparently good state of health. Without any previous indisposition, he was attacked suddenly one evening with violent pain in the belly, which almost bent him double. He was carried home on a board, and threw up from his stomach some bread and wine which he had taken in the morning. A similar mode of treatment was adopted to that in the above cases, but without effect. He died in a few hours.

"*Appearances on dissection.*—The contents of the stomach had escaped into the abdomen. At the small curvature of the stomach, about an inch from the pylorus, a hole was found, about a line and a half in diameter, and rounded as if it had been made with a punch. This hole was surrounded by a red circle. The interior of the stomach, and every other organ, were perfectly healthy.

"*CASE VI.*—Desgranges attended a woman who for four years had been subject to pains in the stomach, from the severity of which she at length died. She never vomited. A similar aperture was found in the stomach to that above

described. In other respects the stomach was perfectly healthy. The intestines were slightly inflamed.

"CASE VII.—A man had been subject for a considerable time to pains in the stomach. He had sometimes long intervals of ease. He gradually emaciated. Vomiting took place; and, after great and tedious suffering, he died. The pylorus was found in a scirrhus state. Two apertures were seen in the stomach, one an inch in diameter, the other much smaller. There was no appearance of inflammation in any part."*—*Lond. Med. and Phys. Journ.* Oct. 1828, from the *Journal Complementary*, July, 1828.

26. *Hemiplegia in a Child nine months old, produced by the Mother giving it the Breast immediately after being in a Violent Rage*—Dr. BERLYN observes in the *Neue Jahrbücher*, Vol. II. 1827, that he has met with a case of this kind. The little patient recovered in a few days.—*Bull. des Sc. Méd.* June, 1828.

27. *Polypus of the Heart*.—M. RIGACCI, of Florence, mentions a case where a well organized polypus was found after death in the heart. A young woman, affected with some disease of the heart, supposed to be an aneurismal dilatation of the left ventricle, after having been treated with digitalis and other means, died on the 18th of December, 1827. On examination of the body after death there was found, among other things, a body of a fleshy appearance, similar to that called sarcoma, in the left ventricle of the heart. This ventricle, very much enlarged, had its walls much reduced in thickness. From the interventricular partition arose one of the roots of the morbid production. Another root took its rise from the auriculo-ventricular valve, by two peduncles. These two united, and formed a round body, two inches and two lines in length, which terminated by a ragged point, the surface of which did not appear covered by any membranous layer. On the external surface of the polypus were seen three reddish fillets, which, arising from the *carneæ columnæ*, extended to the morbid production, and appeared to be lost in its substance. These, examined with a good lens, were found full of reddish fluid, and were recognised as sanguiferous vessels. In order to prove the fact the more satisfactorily, two of the fillets were injected with mercury. One of them burst at the distance of an inch from the introduction of the tube, but the other was completely filled, and exhibited its divisions and ramuscles, which became lost in the substance of the polypus. The polypus, attentively dissected, was discovered to be formed of four or five fibrous strata, superposed one upon the other, and intimately united. The author remarks that these observations do not permit a doubt that this polypus was properly organized, and that its formation took place before death.—*Antologia Firenze*, Feb. 1828.

28. *Enormous Hypertrophy of the Heart, &c.*—Dr. JOHNSON saw the patient, (Dr. Cox,) about December, 1827, and examined his chest with attention. The action of the heart was observed to be excessive—"the organ beat over a large space—the arteries throbbed violently—the jugular veins pulsated—the "*bruit de scie*," was very distinctly heard—the respiratory sound was audible in all parts of the chest, which also sounded well on percussion. Dr. Cox appeared very much agitated and nervous; it was, therefore, hoped that part, at least, of the great action of the heart was attributable to nervous palpitation. The countenance was pallid, and inclined to be sallow—the breathing was disturbed by exertion, especially by ascending stairs or high ground. In other respects, there was no apparent disorder of any organ in the body. Each subsequent examination tended to increase the fear, that active enlargement of the heart was going on, and, in this opinion, Dr. Clark, and several other medical friends, concurred. It was rather remarkable, however, that two or three glasses of

* "For much additional information upon this very interesting, and as yet obscure subject, our readers may consult the *Dictionnaire des Sciences Méd.* Tome XLVI. p. 314, art. *Perforation*, illustrated by plates."

wine invariably lessened the action of the heart, and ameliorated the patient's distressing feelings—especially the pain in the region of the heart, of which Dr. C. often complained. Local depletion, counter-irritation, digitalis, and diuretics, were long and vigorously employed, but not, we believe, with any decided effect. Dr. J. lost sight of the patient for seven or eight months, and did not see him till the 10th of August, ten days before the fatal termination of the disease. Dr. Cox called on Dr. Johnson, and stated that his complaint had recently taken an entire new turn. The distress in the region of the heart was greatly mitigated, and his principal sufferings were referred to the epigastrium, which was so exquisitely tender, and withal so prominent, that a physician that morning thought there was acute inflammation and enlargement of the liver. On examination of the chest, there did not appear to be any change in the physical signs of hypertrophy of the heart—on the contrary, they seemed all to have increased. But the tenderness and pain in the epigastrium, (where, by the way, there was a tremendous pulsation,) masked the other feelings, or engrossed Dr. Cox's entire attention. Leeches, blisters, two general bleedings, gave little or no relief. The breathing became so embarrassed that he was obliged to be propped up in bed, and he expressed himself as always on the brink of suffocation. In this dreadful state he lingered till Wednesday, the 20th of August, when death put a period to his sufferings.

The body was examined by Dr. Hodgkin, in presence of Mr. Morrah, Dr. Johnson, and two medical students. The surface was slightly tinged yellow, and the ankles were œdematous. In the chest there were better than three pints of reddish serum, but no marks of inflammation. The heart was so enormously enlarged, that neither Dr. Hodgkin, Mr. Morrah, nor Dr. Johnson, had ever seen one of such a size before. The cavities were dilated as well as the parietes thickened. There was nothing the matter with the mitral or tricuspid valves; but one of the semilunar valves of the aorta was dilated into a pouch that would receive the end of the thumb up to nearly the first joint. The inner coat of the aorta, opposite to this valve, was thickened and irregularly raised. There was no other morbid appearance in the arterial system. The lungs, especially on the left side, were condensed, but not like hepatization from inflammation. In the upper lobe of the right lung was found some small masses of calcareous deposit, and the remains of a tuberculous excavation, completely lined with a shining membrane, and communicating with one of the bronchia. The liver was rather smaller than usual, hard, and curiously mottled with yellow and red specks, so as to present an extremely diseased appearance. The spleen was very much indurated, and carnified. But the most remarkable phenomenon in the abdomen, was the state of the mucous membrane of the stomach and intestines. Besides a very minute injection of the vessels, the membrane was, in a very great extent of surface, completely *œdematous*. The rugæ in the intestines presented the appearance of bladders filled with a thick but pretty clear fluid, as in some blisters.

Dr. Hodgkin was of opinion that the state of the semilunar valve in the aorta, as above detailed, might be the cause of the hypertrophy, as not only keeping up irritation in the neighbourhood of the ventricle, but as checking the issue of blood from the left side of the heart. The writer of this notice cannot entirely coincide with Dr. H. on this point. The action of all tangible arteries was in proportion to that of the heart, and there did not appear to be the least check to the issue from the ventricle into the aorta.* The patient had had acute rheumatism, and this, combined perhaps with a faulty constitution from birth, may have determined the disease of the heart. The dissection was interesting in another point of view. It showed the natural cure of a tuberculous excava-

* The rush of blood, however, past this enlarged valve, at each stroke of the ventricle, was evidently the cause of the "*bruit de scie*," or "stroke of a saw," which was heard corresponding with the pulse and the ventricular contractions. It is difficult to conceive the cause of this enlargement of the valve, in a direction *contrary to the current of the blood*. The only way in which it can be accounted for, is a frequent attempt at *retrogradation* in the circulation through the aorta, as it is only then that the semilunar valves can be put on the stretch.

tion—in short, Dr. Cox must, at one time, have had tuberculous expectoration, or, in other words, phthisis. Considering that two, if not three, of his brothers died of phthisis, it is remarkable that a broken down tubercle should have terminated favourably in such a constitution. There were no other tubercles, however, in the lungs. The patient bore his dreadful sufferings during the last ten days of his life, with heroic firmness of mind, although he was conscious of the fatal nature of the malady!—*Med. Chir. Rev. Oct. 1828.*

29. *On Tubercles.*—DR. BOULLAND, in a very erudite and interesting paper on the accidental heteralogue tissues, in the *Journal des Progrès, Vol. IV.*, to which we have already called the attention of our readers,* establishes the following facts, respecting the mode of production of tubercles, and which we quote as confirmatory of the views of Dr. Alison; see p. 434.

1st, They are the result of a species of morbid secretion.

2d, This secretion, like all the normal secretions, occurs under the influence of an active sanguineous congestion.

3d, They can be developed as a result of local inflammation, or under the influence of a mechanical irritating cause, without predisposition, and that consequently, it cannot be admitted that they are developed without an appreciable cause, and, in consequence of a general affection.

4th, That there are some cases on the contrary, where it is impossible not to admit this predisposition, of some cause upon which we would make it depend; causes, which in the present state of the science, must be regarded as hypothetical, and which are the alteration of the fluids, alteration of the nervous system, hereditary constitutions, &c.

The actual state of our knowledge respecting tubercles, may be reduced according to Dr B., to the following positive facts.

1st, The tuberculous matter is a variety of pus, the principal character of which is its disposition to concrete. 2d, It is produced by a species of morbid secretion. 3d, It is at first deposited in a liquid state, and concretes from the circumference to the centre. 4th, It may occur in all the organs capable of secreting pus. 5th, It can assume, without being different itself, different forms, which appear to depend only on the conformation of the particular organs, in which it is situated; thus it may be infiltrated, in round, or irregular masses, encysted or free.

The hypothetical state of our knowledge on this subject, consists in the following questions, towards the solution of which, researches may be usefully directed. 1st, Is there a particular solid organic element, which exclusively produces tuberculous matter? 2d, Is there a particular alteration of the blood, or of the other fluids, in the state called the tuberculous diathesis? 3d, Upon what other cause can the modification of constitution, which predisposes to the formation of tuberculous matter depend?

MATERIA MEDICA.

30. *On the Therapeutic Properties of Morphine.* By V. BALLY.—A little bitter taste in the mouth, is, according to M. Bally, the only effect produced on the mouth and œsophagus by morphine. "It occasions no thirst, redness of the tongue or gums, or swelling of the tonsils. When given in moderate doses, morphine produces no loss of appetite or any other disorder of the digestive functions; wherein it differs greatly in its effects from belladonna. In most constitutions, however, it produces vomiting, if administered in full doses. This property it appears to possess in a very high degree, which is a great obstacle

* Vol. I. p. 444.

to its being used as a medicine. To avoid this effect, the dose at first should be very small, and should be very gradually and cautiously increased.

"The principal effect produced by morphine on the intestinal tube is constipation; hence it may be advantageously administered in cases of diarrhœa. But M. Bally has known several instances, where, after producing a constipated state of the bowels at first, a continuance of the medicine has brought on an abundant discharge of fecal matter. It sometimes produces colic pains about the region of the navel, but these are generally of short duration; and they cease of themselves, even when the medicine is continued, if the dose be not regularly increased. The author has some reason to consider the medicine as a vermifuge also, and he relates cases, where, under its use, worms have been discharged by vomiting. It is not improbable, however, that if any other emetic substance had been administered in these cases, the same effect would have resulted. He has examined the intestinal canal in some instances in which morphine had been taken, but he could never discover any particular effects produced by it on the mucous membrane, probably owing to the smallness of the doses.

"With respect to the urinary organs, the action of morphine is very decided on the bladder. In almost every instance it produces a difficulty of passing the urine, and this amounts sometimes to a complete retention; but the dysuria generally ceases as soon as the medicine is omitted. This property of morphine, however, only manifests itself in men: M. Bally remarks that the remedy never produces the least difficulty of passing the urine in females. This is an extraordinary physiological fact. Morphine produces no sensible effect on the kidneys. The secretion of urine neither increases nor diminishes under its use, nor does the quality of the fluid become sensibly changed.

"M. Bally states in positive terms that the vascular system is by no means excited by the exhibition of morphine in moderate doses. He thinks that the reason which has induced some physicians to consider the remedy as an excitant has been from observing its effects where very large doses had been administered, and where the functions of the circulating system were disturbed in common with those of all the other organs. The author relates several cases in support of his opinion respecting this point; and in conclusion he states, that if the remedy have any effect at all on the heart and arteries, it is a sedative, not an exciting effect.

"In the next place we are informed that morphine has no tendency to produce hemorrhoids, that it has no emmenagogue properties, that it will not provoke nasal hemorrhages, nor produce hœmoptysis, that it will not allay cough in a satisfactory manner, that it is not diaphoretic, that it has no influence in the production of heat, that it will not oppress respiration, that it produces no flushing of the face or symptoms of asphyxia.

"The exhibition of morphine gives rise, in very many instances, to an intolerable itching of the skin. The irritation in some cases extends all over the surface, in others it is partial, confined more particularly to the nostrils, neck, loins, and the genital organs. The itching is not uncommonly accompanied by a cutaneous eruption.

"The brain and nervous system are the parts upon which morphine exerts its influence most particularly.

"Trembling and agitation of the muscular system are symptoms sometimes produced by the remedy, if continued for a length of time. It has also the property of occasioning dimness of sight, which renders it an improper remedy in amaurosis. M. Bally, having never administered morphine in very large doses, cannot speak with positiveness whether or not it have the property of occasioning dilatation of the pupils, but his opinion is that it has not. A young man took, in a mistake, a pill containing three grains of it; in this case no dilatation of the pupils took place. In cases of poisoning with opium, we have witnessed the pupils contracted to the apparent size of pins' heads. The author has noticed similar effects produced by the acetate of morphine. MM. Orfila, Magendie, Du-

pup, and Barthelemy state that the pupils invariably dilate in experiments with morphine on animals. Respecting this fact, M. Bally observes that the iris of dogs, cats, and horses has a mobility much greater than that of man.

"Morphine appears to possess all the sedative effects of opium, and the action of both on the system is very similar. The former, however, is not liable to produce head-ache and the other symptoms of excitement which usually follow the exhibition of opium. The stimulating effects of opium have been generally attributed to the narcotine which enters into its composition; but some chemists are of opinion that the latter substance is nearly inert when deprived of morphine, and that the stimulating properties which it appears to possess when administered to animals, depend upon some portion of morphine remaining in combination with it. It is scarcely necessary to notice that a combination of these two substances may possess medicinal properties very different from those of either singly. Although pure narcotine may be inert in its effects on the system, still by its combination with morphine its latent properties will be developed, and will modify the therapeutic properties of the latter substance.

"Morphine and its salts have not yet found their way into general use amongst medical men. This is rather to be regretted, as their medicinal properties are, so far as observation has hitherto proved, better adapted than those of opium, for the purposes for which this is usually administered.

"In the production of sleep, and in some other effects, M. Bally says that there is no proportion between the therapeutic properties of opium and its extracts, and those of morphine. Fifteen grains of crude opium contains, on an average, one grain of morphine. According to this proportion, it might be expected that a given quantity of morphine would have fifteen times the effect on the system that the same quantity of opium would produce. This is however by no means the case. M. Bally observes that it may be admitted, as very probable, that a grain of the aqueous extract produces greater drowsiness, than a quarter of a grain of its salifiable base. This is a circumstance well worthy of attention.

"In summing up his observations on the action of morphine, M. Bally divides its effects into the direct and indirect. The former are nausea, vomiting, gastralgia, eructations, constipation, and intestinal pains; the latter are ischuria, itching, and all the cerebral symptoms. It is to be observed, however, that most of these symptoms occur only when the remedy is administered in large or frequent doses. There is one very important advantage likely to result from the employment of the active principles of vegetable substances as therapeutic agents, namely, that they may be introduced into the system through the medium of the skin, in sufficient quantities to affect the constitution. Independently of the difficulty with which we sometimes meet of persuading individuals, particularly children, to take medicines, the stomach is often so irritable, as to reject every thing in the form, or under the name, of medicine. M. Bally says that he has met with great success in administering the active principles of some remedies in this way, which he calls the *sub-epidermic* method. It consists in removing the epidermis by means of vesicatories, and in applying the active substances to the surface of the true skin. Of two persons affected with *chiroplegia*, or paralysis of the hands, the one was cured by the action of a grain and a half of strychnine, administered according to this method daily; the other had recovered the use of one hand entirely, and very nearly the entire use of the other when M. Bally wrote his memoir. Morphine in particular produces wonderful effects in rheumatism, lumbar neuralgia, and sciatica, when employed according to the sub-epidermic method. It always gives ease, as soon as it is brought in contact with the skin; and patients complain of great torments when its employment is discontinued for any time."—*London Medical and Surgical Journal*, Oct. 1828, from the *Mémoires de l'Académie Roy. de Méd.*

31. *Muriate of Ammonia*.—Dr. F. L. HUNEFELD has ascertained that finely

powdered muriate of ammonia, united with gray mercurial ointment, and the extract of cicuta, is an excellent application for effecting the disappearance of lymphatic tumours and indurations, arthritic depositions, as well as rheumatic indurations and engorgements.—*Bulletin des Sc. Med.*, Jan. 1828, from *Archiv. fur Mediz. Erfahrung*, 1826.

32. *New Mode of Administering Quinquina*.—Dr. P. RICHER, of Metz, relates in his thesis presented to the Faculty of Medicine of Strasbourg, Dec. 30, 1826, four cases of facial neuralgia, which, after resisting the ordinary treatment, yielded to the administration of powdered quinquina, one grain, and snuff, two grains, mixed, and used as snuff. The above dose was always sufficient, and in from two to three days the patients were cured as if by enchantment.

33. *Chloride of Lime*.—"Mr. DOCKER, surgeon of the Windsor Castle, East Indiaman, has made a report on the effects of this important agent in the destruction of unwholesome effluvia between the decks of ships. As the vessel approached the tropics, they sprinkled the orlop decks with the solution twice a week, and they found that it completely succeeded in removing the disagreeable, close smell which always prevails when a number of persons are confined in a limited space, and without a free circulation of air. Mr. Docker attributes a great deal of the good health of the crew and passengers to the agency of the chloride.

"During their stay at Saugur Island, in the mouth of the Ganges, the gun-deck was regularly sprinkled, morning and evening, with the solution. The consequence, (he thinks,) was a comparative immunity from cholera, which was raging fatally in the other ships. The wind blew from the shore all the time and was loaded with morbid miasmata. In China they used the chloride, and escaped the dysentery which prevailed in the river Tigris at the time. Mr. Docker found the solution of incalculable value in removing the putrid and disagreeable smells that are usually generated in the sick-births of ships. He also verified the efficacy of the solution, as a gargle in arresting mercurial ptyalism. In a case of sloughing wound, where all the ordinary remedies had failed, 'it speedily put a stop to the sloughing process, and induced the sore to take on a healthy appearance.'"—*Medico-Chirurgical Review*, Oct. 1828.

34. *Experiments on the Extractum Aloes Vulgaris*. By RICHARD BATTLE, Esq.—"I.—Two pounds avoirdupois, or 2 lbs. 4 oz. 2 drs. 48 grs. apothecaries' weight, of the extract of aloes, in the state in which it is imported from Barbadoes, imparted to cold distilled water 1 lb. 9 oz. 1 dr. 42 grs. The solution was of a fine yellow-brown colour; its taste intensely bitter, yet free from the flavour peculiar to this species of aloes.

II.—The residuum of I. imparted to hot distilled water 2 oz. 15 grs. leaving 4 oz. 2 drs. 15 grs. of undissolved matter. The solution was darker than I. inclining to purple, less intensely bitter, but having the peculiar flavour of the aloes vulgaris.

"III.—The residuum of II. imparted to alcohol 3 oz. 4 drs. 48 grs. leaving 5 drs. 27 grs. insoluble in this menstruum. The tincture was of a deep brown colour, bitter, and very offensive both to the taste and smell.

"IV.—The residuum of III. imparted to one part of liquor potassæ, diluted with seven parts of water, 4 drs. 48 grs. leaving, V.—79 grs. of a dark earthy appearance, deprived of all aloetic properties, and void of any qualities that the taste or smell could detect. Even the alkaline solution, IV. of a deep heavy brown colour, was so slightly aloetic as to be nearly insipid and inodorous.

"In I. or the cold solution of the aloes, again reduced to an extract, the profession will find at its disposal a valuable medicine, but the results II., III., will probably be found to be too drastic, and IV., V., absolutely inert."—*Journal of Morbid Anatomy, &c.* Vol. I. Part. I.

35. *On the vinous tincture of the seeds of Colchicum Autumnale.*—Professor CHELIUS has ascertained that during the use of the above medicine, the proportion of uric acid, in the urine, is very much augmented, and he attributes to this fact the benefits which it produces in rheumatism and arthritis. Dr. C. has employed the vinous tincture with success, both in acute and chronic arthritis, and with advantage also in different forms of prosopalgia, in sciatica, rheumatic ophthalmia, articular dropsies, and some cases of paralysis of the inferior extremities, not produced by an arthritic cause. Dr. C. commences with a dose of from 20 to 30 drops, and gradually and cautiously increases it, till signs of gastric irritation manifest themselves. He has never seen it produce ill effects, but it must be given with caution; he thinks the dose given by the English practitioners, too large.—*Bulletin des Sc. Med., May, 1828, from the Heidelberg Klinische Annalen, Tom. III.*

36. *Caustic Paste.*—Professor GRAEFE gives the following formula for the preparation of a caustic paste for the destruction of the callosities which accompany fistulas. R. perchlor. hydrar. ʒij.—Gum arab., aq. distill. āā gr. xxiv. misce intim. To be applied to the callous parts.—*Journ. de Chimie Méd., Sept. 1828.*

PRACTICE OF MEDICINE.

37. *On the Employment of Lunar Caustic in Plastic Inflammations of the Mucous Membrane of the Mouth, Nares, Throat, &c.*—"The mucous membrane lining the above conduits, and also that lining the larynx and trachea, is very subject to inflammation, and this inflammation is often accompanied by an exudation which becomes converted into a kind of false membrane. To this affection Laennec and some others have applied the term *plastic*. It is often epidemic—sometimes sporadic. But the membranes above-mentioned are subject to a chronic inflammation of a passive kind, in which the vessels are enlarged, their secretions increased and vitiated, and the patient kept in a very uncomfortable state for years. The uvula frequently becomes relaxed and elongated, and by tickling or irritating the epiglottis, keeps up a hacking cough, which excites great alarm in the minds of patient and friends. It is in this complaint, a very prevalent one, that an eminent surgeon of this metropolis has gained great reputation by employing lunar caustic in solution, on a sponge or brush, and very freely applied to all the above parts as far as they can be reached.

"A French physician, (M. Gerouard,) lately transmitted a memoir on this remedy to the Society of Medicine, in which he relates many cases of its success in the plastic inflammation alluded to, and recommends the caustic to be applied not only to the fauces, nares, and parts adjacent, but to be introduced into the larynx, where the inflammation has affected that part. M. Gerouard frequently employs the nitrate in substance, carefully fixed in a silver tube, straight or crooked. He observes that to cause the false membranes to be detached from the larynx or trachea, it is not always necessary that the caustic should enter these conduits. 'It is sufficient, in many cases, to touch the superior aperture. I have seen patients eject membranous tubes of some inches in length, the day after the rima glottidis was touched with caustic.' Dr. Authenac has also laid before the public some cases where the lunar caustic proved very beneficial. Dr. Brown, of New York, has also published a paper on the same subject, in the January Number of the Medical Recorder for the present year.

"But we wish to draw the attention of the profession to the employment of this topical application, in the chronic inflammations and relaxations above mentioned, as well as in laryngeal affections simulating phthisis. We have seen some cases recently where chronic coughs, accompanied by muco-purulent expectoration, that had harassed patients for years, and baffled all their physi-

cians, gave way, in a very rapid manner, to a few applications of solution of lunar caustic on the sponge of a common probang. These hints may prove useful to many of our brethren. The state of the fauces should be carefully examined in all cases of chronic cough; and the epiglottis may be often seen by pressing down the tongue. That part, and even the rima glottidis, may be always examined with the finger."—*Medico-Chirurgical Review*, Oct. 1828.

38. *Puerperal Peritonitis cured by the Application of Ice*.—A woman, on the fourth day of her accouchement, was attacked with great weakness, ardent thirst, and continual vomiting. The abdomen distended, excessively tender on pressure, extremely painful; face hypocratic; pulse hard, small, and frequent; lochia suspended. The patient was bled, iced drinks administered, and ice applied on the abdomen. Three hours afterwards the symptoms had abated, the thirst and vomiting had ceased, and the abdomen was less distended and less painful, on pressure. The ice was continued to the abdomen; the next day perspiration came on; the breast filled with milk, the lochia reappeared, and the patient entirely recovered.—*Journ. de la. Soc. Roy. de Med. &c. de Toulouse*.

39. *Ammoniacal Sulphate of Copper in Epilepsy*.—Dr. URBAN, of Bernstadt, considers the ammoniacal sulphate of copper as one of the most efficacious and certain of the remedies in purely nervous epilepsy, without complication. He relates in *Hufeland's Journal*, for October, 1827, five cases in which he employed it with success.

40. *Metritis cured by Hydriodate of Potass*.—Dr. GUERARD relates in *Horn's Archives*, for July and August, 1827, two cases of metritis after accouchement, cured by the hydriodate of potass. He prescribed three grains of this medicine in six ounces of emulsion, to be taken in the twenty-four hours. The remedy, it is said, did not produce any influence on the secretion of the milk, or upon the health of the infant.

41. *Treatment of Syphilis without Mercury*.—It appears that this mode of treatment has many advocates in Germany. Dr. Handschuch, in a work recently published, mentions, that he treated in the military hospital at Würzburg, from May, 1819, to February, 1820, one hundred persons; of whom, eighty-two had primary, and eighteen secondary symptoms by antiphlogistic remedies alone, without any mercury.

Dr. Oppenheim has obtained equally favourable results from the same mode of treatment, in the hospital at Hamburg. He states that there were cured in eighteen months four hundred and two syphilitic patients. These remained in the hospital on an average fifty days, whilst formerly, under the mercurial treatment, they remained twice that period. Dr. O. commenced by venesection from four to twelve ounces, according to the constitution of the patient, and this was repeated on the second or third day, when the patient still complained of pain in the ulcers. The patient, during the whole period of treatment, remained in bed, and he was allowed for diet, morning and evening, water soup, to which was added, at dinner, two ounces of white bread. Glauber salts was administered so as to produce daily three or four evacuations from the bowels. The local affections were treated according to circumstances. Buboes were generally cured by pressure, even where fluctuation was perceptible. The pains that arose were not considered of much moment. Where this method did not succeed, emollient cataplasms were applied to accelerate suppuration, and then the buboes were opened with the lancet.—*Hecker's Litterarische Annalen der gesammten Heilkunde*, 1827.

42. *On the Use of Circular Ligatures in Intermittents*.—About thirty years ago, the application of the tourniquet was recommended by Mr. Kellie, a naval surgeon, as a preventive of the paroxysm of intermittent fever, and several in-

stances are recorded by him in Duncan's Medical Commentaries, for 1794, in which he used it with success. He applied the instrument to the arm of one side and the thigh of the other. Some further experiments have recently been made by Dr. ROBOUAM, on the anti-febrile powers of circular ligatures, and the result is favourable. The ligatures were applied to the arm, and made sufficiently tight to interrupt the superficial circulation, and to retard that of the more deep-seated vessels. As soon as the extremities began to redden, the patient felt easier, and the symptoms of the approaching paroxysm abated; the cold and trembling ceased; the pulse became more free, &c. Nearly in all the cases Dr. R. found two or three applications of the ligature were sufficient to suppress the fever.

According to Dr. R. the following rules are to be observed: 1st. The most favourable time for the application of circular ligatures is the beginning of the cold stage, when they seldom fail to suppress or mitigate the fit. They have much less effect in the middle of the paroxysm, and none at all during the intermission. 2d. In case of syncope, the ligatures must be loosened; the patient usually bears them better after some time. 3d. If the ligatures are too tight, they may produce dangerous symptoms, and even suffocation. 4th. The application of circular ligatures has an effect correspondent to blood-letting.

43. *Poisoning.*—Dr. PALLAS is of opinion that the best antidote to be administered in the first instance, in all cases of poisoning, whatever may be the nature of the poison taken, is water. He says that oil, which has been recommended as an antidote for cantharides, dissolves the active principle of that article, and aggravates all its injurious effects. Dr. P. has obtained, in one case of poisoning by a strong solution of potass, much advantage from the use of the oil of sweet almonds.—*Mémoires de Médecine Militaire, Vol. XVII.*

44. *Ointment for the Reduction of Glandular Engorgements.*—Take of the strongest mercurial ointment, 94 parts; hydrochlorate of ammonia, 6 parts; mix intimately. Professor Dupuytren, to whom we are indebted for this prescription, recommends frictions with the ointment to be made over the places where the engorgements exist. He thinks that the stimulant action of ammoniacal salt affords powerful assistance to the resolvent qualities of the mercurial ointment.—*Archives, Générales, &c. Sept. 1828.*

45. *Treatment of Nymphomania.*—Dr. OZANAM, of Lyons, communicated to the Royal Academy of Medicine, the cure of a case of nymphomania, by touching the swollen genital parts, with a solution of four grains of nitrate of silver, in an ounce of water. A slight eschar resulted from this application, and the sensibility of the parts were decreased, and in four days, by the application of this mild caustic, repeated twice a day, the patient was cured.—*Journal Général de Médecine, Sept. 1828.*

46. *On Strangury from Cantharides, and its relief.* By JOHN DAVY, M. D. &c.—“Strangury from cantharides, especially when applied to the skin for the purpose of blistering it, is of such frequent occurrence, and generally of such short duration, that it is commonly thought little of; and I hardly know which has received least attention from systematic writers—the explanation of the affection or its relief.

“To those who are conversant in hospital practice, and who apply themselves to pathological anatomy, it must be well known that this kind of strangury is connected with phlogosis of the lining membrane of some part of the urinary passages. I have observed it most frequently in the pelvis of the kidneys, and in the bladder of urine, and occasionally in the ureters, and in the upper part of the urethra. The part affected with inflammation is swollen and dark red, from blood extravasated into the cellular structure, under the epithelium. Sometimes, when the effect is most severe, blood, it is well known, is actually effused into the passages themselves, giving rise to bloody urine.

Sometimes, on the contrary, when the effect is slight, œdema, with very little redness of the mucous membrane is produced, unattended with strangury or any symptom indicating the specific action of the cantharides on the parts in question.

"During the prevalence of strangury, I need not observe the secretion of urine by the kidneys is either much diminished or almost totally suppressed:—At the same time, from the irritation of the bladder, a constant desire urges the patient to attempt micturition.

"The experienced practitioner can have little faith in the means commonly recommended for relieving this painful affection; such as the camphor mixture, *spiritus ætheris nitrici*, &c. Those who have tried these medicines most, if I may draw an inference from the result of my own observation, must place least confidence in their efficacy. The only means of relief which I have found almost constantly to succeed, is the introduction of the catheter, used not with the idea of drawing off urine, but for the purpose expressly in question. It should be employed with delicacy and caution, just slipped into the neck of the bladder, and kept in only a few seconds. The process is seldom very painful, and the relief is almost immediate.

"The rationale of the effect I shall not attempt to explain, as I have nothing but conjecture founded on analogy to offer on the subject."—*Edin. Med. and Surg. Journ. Oct. 1828.*

47. *On the effects of Ligature, and Bleeding, in cases of Poisoning.*—Dr. VERNIERE, has communicated to the Royal Academy of Medicine, a very simple therapeutic measure, which, he says, is applicable in all cases of poisoning. Some time ago, M. Magendie ascertained by experiment, that absorption might be entirely suspended in a dog, by producing artificial plethora, by the injection of tepid water into the veins. Starting from this fact, Dr. V. tried the following experiment; after having introduced three grains of the extract of *nux vomica*, into a wound in a dog's paw, he applied a ligature above the humero-cubital articulation, of the poisoned limb. He then injected slowly, by the jugular vein, as much water as the animal could support, without suffering much; he, finally, opened below the ligature, the vein of the poisoned limb, and after having collected some ounces of the blood, he injected it into the jugular vein of another dog, which died instantly, in tetanic convulsions. The wound of the first dog, being carefully cleansed, a little blood was allowed to flow, and the animal set a liberty. It gave no sign of poisoning. The producing plethora, by injecting water into the veins, being very inconvenient, Dr. V. suspected that this might be obviated by producing local plethora, which could easily be affected by a ligature moderately tight on the limb. The ligature being applied, all that is necessary would be, to open one of the principal veins of the engorged part, to produce the flow of the blood charged with the poison. Two experiments are given by Dr. V., in confirmation of the correctness of this idea. In one of these experiments, three grains of the alcoholic extract of *nux vomica*, were spread over a wound, made in the right cheek of a small dog. After a space of six minutes, during which the experimenter compressed the two jugulars with his two thumbs, he had the jugular vein of the poisoned side, opened with a lancet; the blood flowed in abundance, and the animal placed upon its feet, suffered no other inconvenience than a slight weakness.

In the other experiment, Dr. V. introduced, under the skin, covering the dorsal surface of the right fore-paw, three grains of the same alcoholic extract; and, a strong ligature at the same time, placed around the limb. After five minutes application, the poison was removed by repeated washing; the wound being quite cleaned, the ligature was removed, and the animal being put upon its feet, walked quietly: but, it was soon seized with tetanic convulsions of extreme violence. A large bleeding from the jugulars was instantly performed; the blood flowed freely, and in half a minute the convulsions ceased. The

animal being then placed at liberty, walked as before, only from time to time some rattling expirations were heard, which ceased quickly. Dr. V. thinks, that in this experiment, the ligature being too tight, the artery was compressed with the vein, which prevented local plethora from taking place, (a condition which Dr. V. thinks necessary for protection against the poison,) and, notwithstanding the care to wash the wound, enough of the poison was imbibed to cause, after the removal of the ligature, violent tetanus. From this experiment Dr. V. concludes, 1st. That a very tight ligature is useless. 2d. (What is more important,) that even when the poison has penetrated into the circulation, the evil is not beyond the resources of art, and that it is possible by means of large bleedings, to remove it from the system. These experiments are highly interesting, and especially, when taken in connexion with those of Drs. Pennock and Rodrigue, published in the preceding volumes of this journal. These experiments satisfactorily show that the effects of the poison may be removed, more readily than by the mode recommended by Dr. V., namely, by applying a cupping-glass, or pressure over the poisoned spot, or a ligature to the limb, above the place where the poison has been inserted.

48. *Iodine in Gout.*—We have already announced, that M. GENDRIN, the learned editor of the *Journal Général de Médecine*, has employed the iodine successfully in gout. In his *Journal* for July last, he states that further experience has confirmed its utility. He has varied the mode of using the remedy, having administered it to the exterior, as well as the interior, in frictions, baths, vapours, tinctures, alkaline solution, and enema, and in no instance has he found it productive of injurious effects. In every case, and he has now tried it in twenty-six, the patients were cured in a few days, or their condition rapidly ameliorated.

OPHTHALMOLOGY.

49. *On certain methods of treating Chronic Inflammations of the Eye, lately adopted at the Royal Westminster Ophthalmic Hospital.* By G. J. GUTHRIE.—Mr. Guthrie says that he has been employing with advantage the following remedies in chronic ophthalmia:—

“1. *R. Argenti Nitratis*, gr. ij. ad gr. x.; *Liq. Plumbi Subacet.* gtt. xv.; *Ung. Cetacei* ʒj.

“2. *R. Hydr. Oxymur.* gr. iij. ad iv.; *Liq. Plumbi Subacet.* gtt. xv.; *Ung. Cetacei* ʒj.

“The argenti nitratum and oxymuriate of mercury must be reduced first to an impalpable powder, then mixed with the ointment on a slab, and the liquor plumbi added. It may be done in a glass mortar. A double decomposition takes place in either ointment, which naturally diminishes the strength of each; but this change takes place slowly, particularly in the oxymuriate ointment, so that weeks elapse before they become inert. A very sensible difference is felt by the patient between an ointment only two days made, and another of two or three weeks standing, and the stimulating qualities may be calculated according to the state of the eye, as well as the strength of the composition. The argenti nitratum ointment is gray when first made, but soon changes its colour to a brownish-black. If the argenti nitratum be mixed with the ung. cetacei, (as I once used it,) without the liquor plumbi, it dissolves more rapidly; when used, the powdered nitrate falls into the fold of the conjunctiva, or rests on the lid, and is apt to cause a slough, which is prevented by adding the lead.”

The manner of using the ointment is “by introducing between the lids a portion, larger or smaller, as the case may seem to require it, from the size of a large pin’s head to that of a garden pea. The eyelids being closed, are to be

rubbed gently with the finger, so as to diffuse the dissolving ointment over the whole surface of the conjunctiva; a part of it usually, however works out by the motion of the lids, and should be wiped off, (if the nitrate of silver,) to prevent its staining the skin. Both ointments cause pain: in some persons it is considerable, in others less so, lasting from half an hour to an hour and a half; and when the ointment is newly made, sometimes for four hours, and even until the next day. On the subsidence of the pain caused by the ointment, that which previously existed is found to be relieved, if not entirely removed; and on the subsequent day, the patient usually acknowledges the benefit he has received with regard to all the symptoms. When the application has been severe, and the patient very irritable, a state resembling white chemosis occasionally takes place, and appears formidable to a person unacquainted with the effect of the remedy; it soon, however, subsides. The eye should be fomented with warm anodyne fomentations."

Mr. G. rarely repeats the application until the third day, "but the feelings of the patient are the best guide, the return of some of the old sensations indicating the necessity for its use, which should be, if possible, anticipated. In some cases of acute inflammation, two or three applications will arrest the progress of a serious disease, and effect a cure. In chronic cases, the ointment must be continued for a considerable time, and occasionally alternated with other remedies. Where they create a state of regularly increasing irritation, as they sometimes will do, cupping, purgatives, &c. are of service; when the remedies may again be resorted to."

Several cases are related by Mr. G. in which these applications appear to have been strikingly beneficial.—*Lond. Med. and Phys. Journ. Sept. 1828.*

50. *Amaurosis successfully treated by the Ammoniacal Ointment.* By M. LIS-FRANC.—"Case I. A soldier of robust constitution, who had formerly campaigned in hot countries, and been exposed, in bivouacking, to the cold night air, found his vision grow feeble in the course of 1824. In the following year, he was unable to see his way about the streets, and was directed to have a seton in the neck, some leeches to the temples, and ordered some pills, composition unknown. His sight was improved by the measures employed, and he was enabled to distinguish various objects pretty well. The amendment, however, was temporary only, and, on the 10th of last January he entered La Pitié. He was bled from the arm, and ordered an emetic, but without effect; he could barely distinguish light from darkness—the pupils were dilated but acted feebly, and the left was more sluggish than the right. On being questioned respecting the history of the disease, he replied that, in the first instance, he could see rather better towards evening or twilight than in mid-day; he could also distinguish more clearly any object above him, than one which was below or on a level with the eyes.

"On the 24th of January, the head being shaved, Gondret's ammoniacal ointment was applied upon the forehead, and its employment continued till the 17th of February. Pustules were formed, which ulcerated deeply, and the case was proceeding in a favourable manner, when a severe erysipelas seized upon the head, and required the most active depletion. The patient was bled seven times in the course of as many days, and sixty leeches were applied besides. The erysipelas disappeared, and the powers of vision were exceedingly improved; in the right eye, indeed, they were entirely restored. The left, which was always more affected than the other, was scarcely, if at all improved.

"Case II. A tailor, ætatis thirty-nine, had laboured under amaurosis for two years past, and was admitted into the hospital incapable of seeing at all. The pupils were dilated, and contracted but feebly on the approach of light—the patient had the peculiar undefinable aspect which invariably marks the amaurotic—the globe of the eye was continually rolling in the orbit, and was, in general, rotated upwards; and, lastly, the power of directing the organ, particularly sideways, was already beginning to be lost. The disease had come gra-

dually on, and the patient attributed its origin to his business requiring him to work much by candle-light.

"The ammoniacal ointment was applied upon the forehead and crown of the head, and its use was continued for upwards of a fortnight. Abscesses were formed, and converted into healthy ulcerations, which furnished a copious discharge. The good effects of the *issue* were quickly apparent, for, first, the patient was enabled to distinguish the daylight, then regained the power of discerning the objects around him, and finally, at the expiration of a couple of months, his sight was as perfect as before the amaurosis commenced.

"In order to prove beneficial, the application of the ointment should be always persevered in, till more than superficial ulcerations are produced. In both of the cases recorded above, the disease was very far from being recent, and required the treatment to be continued, in one case, for four months, and in the other for nearly as long."—*Med. Chirurg. Rev. Oct. 1828.*

51. *Pannus successfully excised.* By Professor GRAEFE.—A man, aged 45 years, blind of both eyes, in consequence of the whole of the conjunctiva of the cornea, and sclerotica of both eyes, being changed into a vascular thick membrane, having been treated, without benefit, by partial excisions and topical applications, Professor Graefe resolved to excise it. Accordingly, having raised this membrane, near the cornea, with forceps, it was dissected with scissors, from half the cornea of each eye. As soon as the inflammation produced by this operation had disappeared, the membrane was excised from the other half of the cornea. Some days after, the rest of the membrane was removed in the same way. Vision was restored, and the patient was entirely cured by solution of opium, applied to the eye with a brush. M. Graefe cites this case to show, that the excision of this description of pannus, is not effectual, unless performed part at a time, and at periods sufficiently near to prevent the membrane being re-produced, and with the precaution of not excising too much at a time, lest dangerous irritation should be produced.—*Institut de Clin. chirurg. et Oph. de l'univer. de Berlin.*

52. *Remedy for opacity of the cornea.*—The following combination is recommended in the *Journal de Chimie Medicale, &c. for September, 1828*, as an useful application to promote the absorption of the effused lymph in opacity of the cornea. R. oxyd. hydrar. rub., agaric., alb. āā ʒss. Sacch. alb., ʒj. misce intim. et pulv. subtil. A small portion to be blown into the eye daily.

SURGERY.

53. *Memoir on many Cases of Luxation, in which the efforts at Reduction have been attended by very Severe Consequences.* By M. FLAUBERT, Surgeon in Chief to the Hôtel Dieu of Rouen.—M. F. has inserted in the third volume of the *Repertoire d'Anat. et de Physiologie*, an account of several luxations of the humerus, the reduction of which were followed by evils more or less violent. In five cases of luxation of the humerus, the attempts at reduction produced, in the 1st, rupture of the axillary artery, gangrene of the limb, and the death of the patient at the end of thirteen days; in the 2d, hemiplegia, the consequence, probably, of an effusion of blood in the brain, produced by the efforts at reduction. However, after some time, part of these symptoms disappeared; but the inferior extremity remained numb; the movements of circumduction of the arm were almost extinct, the hand could not be used, the temperature of the limb was diminished, the two last fingers were insensible and slightly tumefied, the thumb extended, the other fingers semiflexed.

The third case is that of a woman, aged seventy years, in whom reduction of luxation of the humerus was effected thirty-eight days after the accident. At the moment that reduction was effected, there occurred emphysema of the

shoulder and a part of the back. A little while afterwards, violent head-ache, hemiplegia of the left side; twelve days afterwards, prostration and death. Dissection disclosed partial or complete ruptures of the nerves which constitute the brachial plexus, at their origin. The cervical spinal marrow presented a range of white spots along the whole extent of the spinal marrow opposite the insertion of the sixth, seventh, and eighth cervical pairs, and first dorsal. In this extent, the spinal marrow exhibited an increased size, and was softened so as to be of the consistence of *bouillie*, of a brownish red colour, or the gray and white portions were mixed and confounded together.

In two others, one with a luxation of the humerus forwards, and the other downwards, very severe effects were produced by the efforts at reduction. In the first, considerable swelling of the limb, with acute pain, produced probably by the rupture of the muscles which surround the humero-cubital articulation; the motion of the forearm was completely destroyed; those of the arm were very feeble, and the fingers could perform only slight movements. In the second the usual efforts could not effect reduction, but they produced at first numbness in the left abdominal member, and at the same time paralysis of the luxated arm. Two months afterwards, notwithstanding the treatment employed, the neck, the wrist, and the forearm were the seat of acute pain, the limb became emaciated and useless, its movements being very feeble. M. Flaubert cites another observation, that of a man, aged forty years, who, overturned by a bale of cotton falling from an elevated situation, had the femur luxated upwards and outwards. The reduction was effected, and the head of the bone was distinctly heard to re-enter its socket. The patient died three days afterwards. Dissection exhibited the following lesions; considerable ecchymosis of the anterior and external portions of the thigh, rupture of the pyramidal muscles, of the gemini and quadratus. Tearing of the capsule, and rupture of the inter-articular ligament near the head of the bone. The articulation contained pus, and through the torn capsule communicated with a collection of bloody pus, situated between the pectineus and adductor muscles.—*Bulletin des Sci. Méd. August, 1828.*

54. *Lithotriety*.—It is our object in this department of the Journal, to present a brief summary of the progress of medicine and surgery, during the preceding three months. Of the improvements in practical surgery, which we have had the pleasure of making known to our readers, one of the most important is that for breaking down the stone in the urinary bladder, or lithotriety. The different articles on the subject in this journal, present a full history of the invention and progress of this operation; it remains for us but to notice its present advances, and the opinion entertained of its value by those who have employed it; and independently of this being the performance of a duty, we are strongly urged to it from the conviction that the operation has been too much neglected in this country, and that its advantages are far from being duly estimated.

M. LISFRANC, whose extensive experience and established reputation, should give great weight to his opinions, and who having no claim to the invention, or to any improvement upon it, can scarcely be suspected of prejudice in its favour, informed the Royal Academy of Medicine on the 29th of November, 1827, that convinced of the superiority of lithotriety over the operation of lithotomy, he had requested Dr. Civiale to perform the former operation upon two patients at the Hospital of the School of Medicine. The first was a boy aged seven years, who had been suffering from stone for a year. Some flexible sounds were introduced into the urethra, preparatively to the operation.

Dr. Civiale introduced with facility a lithonriptor of two lines diameter. The stone, which appeared to be of the size of a very large hazelnut, was promptly seized; although formed of oxalate of lime, it was friable: the patient suffered little. Three days afterwards, a fragment of stone, which had entered the urethra, was extracted, and the operation of breaking down the calculus repeated. It was also repeated twice more, at intervals of two days: a little fever

supervened, a miliary eruption, and diarrhœa. The patient left the hospital, but returned a fortnight afterwards, when he was sounded by M. Lisfranc, and many practitioners, who ascertained that the patient was certainly cured.

CASE II. A man aged sixty, had been cut for the stone at the age of twelve. The operation was very difficult, the convalescence was protracted, and a fistulous opening remained. He commenced to suffer again from the stone about fifteen months ago, and the complaint increased rapidly. The prostate is engorged, the portion of the urethra situate between the internal orifice of the fistula, and the neck of the bladder is much dilated; the urine is glairy; the stone, which is not hard, appears to be of the size of a large walnut.

Five sittings, during which the patient, very gay, showed no signs of pain, sufficed to destroy the stone; he came to the hospital to be operated upon and returned. His cure was complete.

Dr. Gendrin, the distinguished editor of the *Journal Général de Médecine*, does not estimate as highly this operation as M. Lisfranc; nevertheless, he admits its great utility. He says* "lithotritry is an operation which has now been known some years. We cannot doubt at the present day of its utility: but it is necessary to restrict it to a few cases, if we would not endanger the art and ourselves. If we recollect that it is necessary in this operation to introduce large instruments into a diseased bladder, when injuries often occur from the introduction of a sound only; that it is necessary, nevertheless, to repeat the introduction often, which is always excessively painful; that when the bladder has been diseased for a long time, as is often the case in calculous patients, it is much thickened, and cannot be distended by the injection preparatory to the operation, and which is necessary to place the parietes of this organ out of contact of the instrument, we can easily conceive that it is indicated to have recourse to this operation but in cases of calculus which are recent, where the calculi are not numerous nor large, and easily friable. We know that success has been obtained in cases much less favourable; but the cases of failure, and of serious injuries are not spoken of. A fortunate boldness cannot, moreover, ever justify him who encounters hazards. Lithotritry, limited to the cases where it is evidently indicated, renders still to the art services sufficiently great to rank it amongst the greatest discoveries; applied in the more severe cases, not only does it not succeed, but it endangers always the life of the patient; it will sacrifice more victims than cystotomy, and especially the high operation."

M. Cautourelle communicated to the Academy of Medicine, at their meeting of the 11th December, 1827, a case in which the operation of lithotritry was performed. The subject was an old man, whose bladder was so irritable that sounding produced severe injury, which could not be relieved but by many days employment of baths, demi-baths, and emollient cataplasms to the hypogastric region. This man was in a state of marasmus; he had a slow fever, with irregular exacerbations. M. C. administered sulphate of quinine, which contributed to support the strength, and to stop the febrile exacerbations. In a state so alarming, he hesitated to recommend lithotomy, and, moreover, the patient feared, and refused to submit to it. In these unfavourable circumstances M. Civiale undertook the operation of lithotritry; a gum-elastic sound was at first introduced daily, and allowed to remain some instants, to accustom the urethra to instruments; he commenced afterwards the operation. It was necessary at first to allow considerable intervals between the sittings, but they were lessened as the bladder became accustomed to the instruments. In eight sittings this man was completely relieved of his calculus; he acquired strength, the fever disappeared, and he acquired flesh.†

M. Amussat thinks that the operation of lithotritry is not suited to children, on account of the smallness of the instruments that must be introduced; that it is contraindicated in adults with diseased bladders or tumefaction of the prostate;

* *Journal General*, January, 1828.

† M. Gendrin thinks, that this patient might have been more safely and speedily cured by the high operation.

also in patients with diseased kidneys, or with severe affections of organs important to life, as the heart, lungs, &c.; that it is dangerous in old men who have had a stone in the bladder for a long time, and whose urine is glairy. He thinks that it is applicable with every chance of success only where the patient enjoys good general health, and does not suffer much from the presence of the stone; in all other cases he recommends the high operation.

In the *Bulletin des Sciences Medicales*, for August last, is the following notice of a second letter which Dr. Civiale has recently published on lithotripsy. "The new observations on lithotripsy appear to us to offer the greatest interest, and to be sufficient to convince the most sceptical of the advantages of this precious discovery. The first series consists of eleven of the more simple cases, and we have seen with true satisfaction, that the success has always been complete. The patients having one or more stones, and whose organs were in a healthy state, were operated upon easily and without pain, and their cure has been generally prompt and always certain. Persons afflicted with calculi have consequently a great interest not to defer a long time to submit to an operation which offers great chances of success, and spares them acute pains. We find in the second series, six cases reported in detail, several of which are by the patients, in which a large stone and long-continued ill health have demanded the repeated performance of lithotripsy. We particularly distinguish the seventeenth case, that of Baron de Zach. M. Civiale went to Genoa in February, 1827, to see this patient, who had been suffering from stone for two years, his health injured by violent pains. M. C. broke down, in many operations, forty calculi of the size of a common hazelnut, which were crushed in the instrument.

Two cases prove that lithotripsy can be performed even in children. In the third part, Dr. Civiale notices the cases in which he thinks the operation ought not to be performed, and the modifications which have been proposed to his operation by some surgeons.

"The success obtained by Dr. Civiale has been verified by the most distinguished surgeons, and appear to us to justify the advantages of lithotripsy in a great number of cases. This operation, always easy when the stone is of a small size, can still succeed in patients who have a large calculus, and whose organs are altered by the long presence of the stone. We most sincerely wish that this operation would be more extensively known, and that surgeons would imitate the example of M. Lisfranc, and not perform lithotomy, but after having proved by many trials the impossibility of lithotripsy."

It would thus appear that unless some of the most distinguished surgeons of the French metropolis have been guilty of the greatest moral turpitude in reporting their cases of lithotripsy, concealing the unsuccessful, and falsifying the successful ones, of which no one can presume to suspect them; the value of lithotripsy cannot be doubted. That it is not applicable to all cases, is admitted by every one, indeed fatal results have sometimes occurred either from the awkwardness of the operator, or the case not being favourable; nevertheless, in certain cases it is perhaps the only operation that should be attempted.

The precise limits within which lithotripsy is applicable, is however far from being as yet ascertained, many observations are still required to fix them, and the operation is no doubt still susceptible of improvements. As these shall be developed by future experience, it shall be our pleasure to lay them before our readers.

55. *Fistula of the Parotid Duct and Gland successfully Treated.* By M. BEGLARD. —A youth, aged eighteen, lacerated his cheek by falling upon an iron stove. One of the upper screws penetrated the cheek, wounding the buccinator near the masseter, though it does not appear that it reached the mouth. The wound healed rapidly, with the exception of a small fistula through which there was a discharge of a clear liquid, especially while he was eating. This showed that the stenoian duct had been wounded. After having fruitlessly employed the several processes which were directed by his attending surgeon, on the

21st of May, 1821, he placed himself under the charge of Beclard, in *l'Hôpital de la Pitié*. It had been three years since he had received the injury.

Beclard converted the fistula into a recent wound, by the excision of its sides; then with a small trochar he perforated the cheek from the wound, passing the instrument obliquely backwards. Having withdrawn the stilet, through the cannula, which remained in the perforation, he passed the end of leaden wire. Having withdrawn the cannula, he in the same manner made a second puncture; beginning, however, within the mouth, about three lines anterior to the former puncture, carrying the point of the instrument obliquely, till it passed into the wound near the place where the wire was inserted. The external end of the wire was passed through this opening into the mouth, being thus bent somewhat in the form of the letter V. The ends of the wire were twisted together; and the external wound was closed by a needle and the twisted suture. For the first three days, there was some distension and pain, owing to the saliva's not passing at first very readily by the side of the leaden wire. On the fifth day, the saliva passed freely into the mouth, and the swelling was nearly gone; the external wound had united, and the needle was now removed. Still, the internal fistula was not so complete as to carry off all the saliva, while the patient was eating. The duct was distended into a kind of sac, producing, during his meals, a small tumour, which was, however, easily emptied into the mouth, by a very slight external pressure. The leaden wire remained inside the cheek, till it fell out, in September, when the cure was complete.—*Archives Générales*.

56. *Staphyloraphy*.—This operation, which was first performed by Graëfe, in 1816, and three years afterwards by Roux, without, however, his being aware that the former had ever performed it, and in this country, first by Professor Warren,* and subsequently by Professor Stevens,† has been twice performed with success, by Dr. DIEFFENBACH,‡ of Berlin. Some difficulty having been generally experienced in tying the knots in the ligatures by which the edges of the palate are brought together, Dr. Dieffenbach has been induced to employ wire of pure lead, instead of the thread used by other operators, and he has found it much more convenient, it being merely necessary to twist the ends of the leaden wire. The operation, as performed by Dr. D. consists of three steps. In the first, the borders of the division are pared; in the second, the ligatures are applied; and in the third, the suture is closed by twisting together the ends of each ligature of leaden wire. Dr. D. has proposed a second method, which he has not yet, however, tried upon the living subject: in this, needles and ligatures are dispensed with, and a kind of forceps employed to compress, reunite, and hold together, the borders of the division.

57. *Tracheotomy Successfully Performed*. By Dr. SENN, of Geneva.—In Vol. II. pp. 213 and 456, we noticed two cases in which this operation was successfully performed, and Cluotet, of Berlin, is said to have kept a cannula in the trachea of a woman twelve years. The operation would appear perhaps not to be so generally fatal as has been supposed. A little girl aged six years was taken to Dr. Senn, on the 6th of August, 1826; she had difficult respiration, difficulty of swallowing, voice extinct; she had been treated for croup some months before. Dr. Senn advised milk diet, friction to the throat with iodine ointment, and a tenth of a grain of hydriodate of potash, internally every two days. Under this treatment the patient improved, she became fat, and the respiration less difficult. Dr. Senn lost sight of her till April following, when her emaciation was extreme, her respiration wheezing, anxious, scarcely to be observed. The trachea was drawn upwards very strongly at each expiration; deglutition was so difficult that the patient could swallow only liquids. It was determined in con-

* See the preceding number of this Journal.

† See North American Medical and Surgical Journal, Vol. III. p. 233, et seq.

‡ Literar. Annal. des gesammten Heilkunde, Feb. and Nov. 1826.

sultation to perform tracheotomy, and on the 3d of May it was done in the following manner. First the skin and cellular tissue were divided; six hours afterwards two rings of the trachea were divided, and a cannula properly curved was placed in the wound. The difficulty of breathing, &c. ceased immediately. The cannula was occasionally obstructed by mucus for a few days and endangered the life of the patient, but the parts became habituated to the cannula. The child recovered her strength, and was quite well three months after the operation. When the cannula was closed with the finger she could speak, and her voice was becoming daily stronger.—*Journal Général*, Jan. 1828.

58. *Actual Cautery in Osteo-sarcoma of the Lower Jaw*.—Dr. GIERL relates in *Der Neu Chiron*, a journal of surgery and midwifery, a case of osteo-sarcoma of the lower jaw, in which he employed the actual cautery with success, and was thus enabled to dispense with the operation of resection, which he was on the point of performing. Dr. G. thinks that the cautery may, in many cases of this description, be substituted for resection.

59. *Lythotomy*.—Of eighty-three operations by the lateral method, performed by M. J. M. VIRICEL, at the Hôtel-Dieu, of Lyons, eighty were successful.—*Revue Médicale*, February, 1828.

60. *Chloruret of the Oxide of Sodium in Ulcers*.—M. WILLIAUME, of Metz, has found this solution very beneficial in two cases; the first, an ill-conditioned ulcer of the upper lip and ala of the nose; the second a case in which numerous ulcers threatened to invade all the skin of the legs of an individual who had been recently attacked with fever.—*Bulletin des Sciences Médicales*.

61. *On Ligatures of Ruptured Arteries complicated with Fractures or Gun-shot Wounds*.—The rupture of a principal artery of a limb, in fractures and gun-shot wounds, has been supposed to require the amputation of the limb. M. DUPUYTREN has tried in two cases the tying the artery, some distance from the injury, as in the operation for aneurism, and with the happiest success. Professor Delpech, of Montpellier, has also performed it with advantage in one case. M. Dupuytren has published an interesting memoir on the subject, in the fifth volume of the *Repertoire d'Anatomie, de Physiologie, et de Pathologie*; he thinks that many limbs may be saved by this operation.

62. *Fracture of the Cranium, with Depression, cured without an Operation*.—A little boy, nine years of age, was knocked down by a heavy piece of wood, which fell upon his head from a considerable height. Blood issued from the mouth, nostrils, ears, and eyelids. On examining the wound, the cranium was found slightly depressed in the direction from one ear to the other; and above the right ear there was a laceration, an inch long, of the skin. A probe introduced under the detached integuments penetrated easily so far as the opposite temporal region. A large crucial incision, which divided the integuments, brought into appearance a fracture of the bone, which extended from the temporal bone of the right side, across the parietal, to the left side of the head. The anterior portion of the bone was depressed about half a line below the level of the posterior. A second fissure, commencing at the termination of the first, directed its course along the frontal bone, towards the right eye. The edges of this fracture separated to the distance of about a line from each other, so that the pulsations of the brain were observable through it. A great quantity of sanguinolent fluid issued from the fissure. This last circumstance determined Professor GRAEFE to delay the operation of trephining, and to try the effect of blood-letting, cold applications to the head, laxatives, and vinegar lavements. The sensibility of the patient returned in a short time under the employment of these remedies. The whole of the denuded wounds of the bone, which were very extensive, were dressed simply with lint soaked in tepid water. By de-

grees, several portions of the denuded and contused bone separated, forming altogether nearly three square inches of surface. Under these portions of detached bone, the dura mater was converted into a fleshy substance of a good aspect, which, under the continued use of the simple dressing already mentioned, became converted into a firm membranous substance. In about three months, the child completely recovered.

This cure, as well as many more of a similar nature, prove that the application of the trephine is not always necessary in fracture of the cranium with depression. There is no operation, to the performance of which the surgeon is called, so generally unsuccessful as that of trephining, and it becomes almost a question, at least in our mind, whether more recoveries would not take place, upon the whole, if this operation was never had recourse to. Unless the depression be very considerable, we conceive that it would be adviseable to defer it for some time, and give other remedies a fair trial.—*Institut. de Clinique Chirurg. de Berlin.*

63. *Double Luxation of the Astragalus.*—Dr. FOLLOT, of Pouilly, communicated to the Section of Surgery, September 11th, 1828, a case of double luxation of the astragalus, upon the leg and upon the calcis. The astragalus was extracted, and the wound healed. Fabricius de Hildanus was the first who, in a case of this kind, extracted the astragalus instead of amputating the limb; it has since been practised with success by Aubray, Ferrand, Laumonier, Mauduyt, Daniel, Boyer, &c. In our former series, Vol. XIV. p. 104, a case, successfully treated, is recorded, in which the bone was preserved.—*Journal Général de Médecine, Oct. 1828.*

64. *Case in which a Polypus of great size was removed from the Root of the Tongue by Ligature.* By RICHARD HUIE, M. D. &c.—In August, 1826, Dr. Huie was called to see a maiden lady, between forty and fifty years of age, who having been about twelve months previously exposed to cold and fatigue, “was attacked with catarrhal symptoms, attended by some inflammation of the fauces; but her complaints yielded to the usual remedies, and she thought no more of them. Three months after this, however, she was observed by her friends to articulate less distinctly than before, and about the same time, she began to feel a slight difficulty in swallowing. These symptoms continued to increase, until at length she could swallow nothing but liquids, or bread crumbled down very fine, and suspended in soup or tea. She invariably felt worse in damp weather, and it was then only that she experienced any material difficulty in breathing. A degree of retching was often excited, and occasioned great distress; and the food she attempted to swallow was frequently returned through the nose. She spoke like a person whose tonsils were very much enlarged, a circumstance which had led to the application of various rubefacients and gargles, the true nature of the disease never having been understood. On inspecting the fauces, a smooth round tumour was seen filling the greater part of the pharynx, and accompanying the motions of the tongue. The portion of the tumour, which was visible, was of the size of a chesnut; but when, by pressing the tongue downwards, a degree of retching was excited, the lower portion came partially into view, and showed it to be double that size at least.”

On examination with the finger, the tumour was found to be hard and unyielding, and from its wriggling motion, when a degree of retching was excited, it was conjectured that the pedicle was comparatively small, but it could not be brought into view. In consultation with Dr. Ballingall it was determined to apply a ligature to it, and accordingly on the 4th of September, Dr. Huie proceeded to the operation, assisted by Dr. Ballingall and Dr. Russell. While Dr. Ballingall kept the patient's jaws asunder by means of a cork introduced between the teeth, Dr. Huie took a long and stout ligature in his left hand, and grasping one end with a pair of common dressing forceps, he carried it backward into the pharynx on the right side of the tumour. Then touching the parts

gently with the extremity of the instrument, he produced that degree of retching already alluded to, which, bringing the polypus more completely into view, he succeeded, with even less difficulty than he expected, in throwing the ligature over it. He had purposely abstained from forming any noose upon the ligature, being anxious to ascertain, as far as possible, the size of the pedicle, round which the ligature immediately slipped, and satisfied himself by the narrowness of the loop which was formed, that it was in reality very small. A double knot was now tied, and tightened by means of curved probes, forked at the extremity, and the ligature was cut away at the distance of an inch and a half from the pedicle. The latter part of the operation was a good deal interrupted by the retching induced by the introduction of the instruments; but we had the satisfaction of perceiving, by the altered hue of the tumour, that the strangulation was completely effected.

"Upon pulling gently at the ligature on the fourth day, the tumour came away entire; the patient was freed from suffering; and to this day enjoys excellent health.

"The tumour, which is in the Museum of the Royal College of Surgeons, was of an oval form, weighed exactly an ounce, and measured five inches in its long, and four in its short circumference. It was broadest opposite the insertion of the pedicle, which entered at the distance of an inch from the upper part of the tumour. A longitudinal incision, which has been made into it, displays a firm cartilaginous nucleus, as large as a chesnut, surrounded by a fibro-cartilaginous structure, forming the rest of the tumour."—*Transactions of the Medico-Chirurgical Society of Edinburgh, Vol. XIII.*

65. *Case of Osteo-Sarcoma of the Lower Jaw successfully removed.* By JAMES SYME, Esq.—The patient, a man aged twenty-four, about eight or nine years ago, noticed a hard swelling of the gum on the outer side of the grinding teeth of the lower jaw, which gradually increased, but was not painful. When it had attained the size of an egg, he applied to a surgeon who extracted three of the adjoining grinders, after which it grew rapidly, and having become as large as a double fist, he repaired to the Royal Infirmary of Edinburgh, about six years ago, where the tumour was cut off from the bone. The wound did not heal, and the actual cautery was repeatedly applied in vain to make it do so. He returned home after remaining in the Infirmary eight months, and the tumour afterwards rapidly increased.

When Mr. Syme saw him "the mouth was placed diagonally across the face, and had suffered such monstrous distortion as to measure fifteen inches in circumference. The throat of the patient was almost obliterated, there being only about two inches of it above the sternum, so that the cricoid cartilage of the larynx was on a level with that bone. When the tumour was viewed in profile it extended eight inches from the front of the neck. It completely filled the mouth, and occupied all the space below it from jaw to jaw. The tongue was thrust out of its place, and lay between the teeth and cheek of the right side. The only portion of the jaw not implicated in the disease, was the right ramus and base of the same side, from the bicuspid teeth backwards. The tumour, where covered by the integuments, was uniformly very firm, and for the most part distinctly osseous. The part which appeared through the mouth, was a florid, irregular, fungus-looking mass of variable consistence, from which an alarming hæmorrhage had occasionally occurred; and for the last three or four weeks there had been almost daily a discharge of blood to the extent of one or two ounces. Notwithstanding the great bulk of the tumour, the patient could move his jaw pretty freely in all directions. With the exception of the disease now described, Penman enjoyed good health. He was a tall, well made, though much emaciated, intelligent young man, and possessed uncommon fortitude.

Mr. S., with the assistance of Professor Ballingall, removed this tumour on the 7th of July, in the presence of Dr. Abercrombie, Professor Russell, Dr. Hunter, &c. in the following manner:—

The patient being seated on an ordinary chair, an oblique incision was made by running a sharp-pointed knife through the lip, from the right angle of the mouth to the base of the jaw, where he proposed to divide it, viz. at the second bicuspid tooth, which had been removed the evening before. Having exposed the external surface of the bone at this part, it was divided partially with the saw, and the division was completed by means of the cutting pliers. The inferior coronary artery, which Dr. Ballingall had prevented from bleeding by compressing it in the lip, was then tied.

"I next made a long semicircular incision from the left angle of the mouth, in the direction of the base and ramus of the jaw, and terminating over the condyle. Having secured the facial artery, and two transverse branches of the temporal, I dissected down the large flap thus formed quite to the neck, so as to let Dr. Ballingall feel the carotid lying in the muscular interspace, and ready to be compressed if there should be occasion. I then made another curved incision in a similar direction, commencing from the mouth, at such distance above the former as to include a portion of the cheek, which was firmly adherent to the tumour; and having dissected up this flap, divided the masseter muscle, so as to expose the whole external surface of the tumour. The next step was to divide the mucous membrane of the mouth. This rendered the tumour much more moveable, and enabled me to expose the coronoid process, divide the temporal muscle, and open the articulation at its fore part. I had then merely to cut closely round the condyle, and detach the pterygoid, mylohyoid, and other muscular connections.

"The operation occupied twenty-four minutes; but all this time was not employed in cutting. The patient bore it well, and did not lose more than seven or eight ounces of blood. His breathing was never in the slightest degree affected.

"After placing a few folds of caddis in the great cavity left by the tumour, which weighed four pounds and a half, I brought the integuments together on the left side of the face, in a triangular form, and retained the edges in contact by the twisted suture. The incision on the right side was dressed in the same way. Two or three turns of a roller were then put round the chin and head, so as to support the relaxed integuments.

"The patient made no complaint of any sort after the operation. His pulse for the first two days was about 100, but soft, and gradually subsided to the natural standard. He slept well, had an appetite for his food, viz. beef-tea and whey, which were introduced into the pharynx through a funnel with a curved tube, and performed his excretions regularly. The whole of the caddis was removed by the third day, when the patient sat up, and declared that he felt better than he did previous to the operation."

Mr. S. offers the following remarks on the mode of operating. The patient, he says, ought certainly to be seated, since the blood will thus be prevented from running into his throat so as to delay the operation, or even render tracheotomy necessary to prevent suffocation.

There is no advantage, Mr. S. believes, in tying the carotid artery previous to commencing the extirpation. 1. It is unnecessary, because the only arteries which must and ought to be cut, are the facial, some of its branches, and some branches of the temporal. 2. It must exhaust the patient, especially when the tumour throws an obstacle in the way, as where there is hardly any space left for applying a ligature. 3. It increases the danger, since it cannot be denied that there is always more or less risk of hæmorrhage on the separation of a ligature from so large a vessel as the carotid. 4. It is of no use, since the anastomotic communications are so free, that a ligature at the trunk is not sufficient to arrest the flow of blood from its branches. 5. Any good effect that can be expected from *tying* the trunk, may be obtained by *compressing* it after the integuments lying over it have been dissected off or divided.

For sawing through the lower jaw, Mr. S. thinks that the chain saw, is not the best instrument. It is not necessary to saw through the whole thickness

of the bone. A pretty deep groove being made, the cutting pliers easily complete what remains.

"The external surface of the tumour should be completely exposed before proceeding farther, since all the vessels which ought to be tied may then be tied in the first instance, and a free drain is afforded to the blood which oozes from the small branches. The mucous membrane of the mouth being next cut by a scalpel, carried from the tonsil outwards, the tumour is rendered much more moveable, and the surgeon will generally be able to free the coronoid process from its muscular connections. Should he fail in doing so, he ought to cut it across with the saw or pliers, and then depressing the tumour as far as possible open the articulation on its fore part; after which he has merely to carry his knife close to the tumour, and divide the remaining attachments.

"I think Dr. Cusack is entitled to much praise for insisting on the propriety of opening the articulation from before, since a wound of the internal maxillary, or even the temporal, is otherwise almost inevitable.

"Penman is now quite well. His mouth is contracted to nearly the natural size, and his appearance is not disagreeable. He is daily improving in articulation, and can already express his wants pretty intelligibly."—*Edin. Med. and Surg. Journ.* Oct. 1828.

66. *Fatal Case of Depressed Fracture of the Skull, in which the symptoms of Compression did not appear till some days after the accident.* By JAMES WALLACE, Assistant Surgeon, R. N.—On Sunday evening at seven o'clock, July 17, 1825, a seaman in a fray received a wound in the head, with what instrument, or what were the symptoms which immediately followed, could not be ascertained. At half past ten o'clock, however, when he was first seen by Mr. Wallace, he was quite sensible, and able to answer questions distinctly. "The pupil, the pulse, and the respiration were perfectly natural. The wound in the scalp was about half an inch in length, and situated immediately over the junction of the superior angle of the left parietal bone with the occipital. There was a great deal of puffiness around the wound, with a hardening around the puffiness, which communicated the feeling as if a portion of the bone were depressed; but as this is often a deceptive feeling, and there was no symptom indicating compressed brain, I did not think myself warranted to cut down and examine the bone. I introduced the point of my little finger into the wound, in the hope that thus I should ascertain whether there was depression; and on making pressure with the finger at that time, the man winced and complained a little. But as it appeared to me that the pain he complained of was more from irritation in the scalp, than from pressure on the brain, and as all other circumstances were favourable, I made no further examination, and simply dressed the wound.

"That night he slept soundly. At six next morning he rose with the rest of the convalescing patients, went down to his birth on the lower deck to change his clothes, and at eight was in the sick birth, seemingly as well as if nothing had happened to him. All Monday he kept equally well till towards evening, when severe head-ache came on, which was completely removed, however, by a copious blood-letting; and on Monday night he slept again soundly. On Tuesday he was up at the usual hour, (six,) but as he had still slight head-ache we sent him to bed again, and gave him saline purgatives. Through the day he was easy, and at night slept well. On Wednesday he had not any particular complaint, he was in the birth with the rest of the patients, and we were beginning to forget almost that he had met with a serious accident. But on Thursday morning, although by all accounts he had slept well enough, he was heard moaning, and on being spoken to, he was found in a state of stupor, and delirious, with the eyes suffused and irritable, the pupils contracted, and the respiration much hurried. The wound had been looked at on Tuesday, and presented then rather an unfavourable aspect; now it was in the same state, without any disposition to heal, discharging a thin ichor, and retaining all its

surrounding hardness and puffiness. It now occurred to us that there was separation of the pericranium and dura mater from the bone; and to ascertain this, and consequently to apply the trephine, we cut freely down upon the part. On laying bare the bone, we found that it was indeed depressed to a very considerable degree. A portion of it immediately under the wound, in size about the circumference of a crown, was beat in upon the brain full half an inch, and broken into four pieces. The pieces of bone had their points thrust down upon the brain, while the other ends were still attached to the sound bone, the whole forming outwardly a cup-like cavity. Instead, therefore, of trephining, merely to give exit to matter pent up between the cranium and dura mater, we trephined to raise the depressed bone. Mr. Bell, the surgeon of the ship, performed the operation; and on removing the portions of bone, the brain again bounded into its place. The dura mater was found injured and slightly sloughy at a point. The brain itself might be slightly lacerated.

"It would be needless to detail particularly the treatment which was pursued from the performance of the operation up to the time of the man's death. It is enough to say, that, by strictly putting in force the necessary measures, all immediate danger was warded off. Three days after the operation he was perfectly in his senses again; the pulse moderate; the heat of skin natural; and the wound of the scalp had healed to about an inch. For three or four days more he did as well as we could have wished, and we were beginning to entertain great hopes of his recovery. But at the end of that time a small, sloughy, fungus-like substance appeared at the bottom of the wound. At the next dressing it had increased, and speedily it began to tear up the wound. Now too a second substance of the same kind appeared, which increased like the first, while the discharge from the wound became exceedingly fetid. By and by the greater part of the fungus dropped off, but immediately it was replaced by a new portion, which, again falling off, was as speedily replaced by another. At every dressing there was a portion to come away, and a new portion to supply its place. Under all this the patient retained his senses; but he gradually sunk in spite of all support; and on Sunday the 7th of August, exactly three weeks after the receipt of the injury, and seventeen days after the performance of the operation, he expired."—*Ibid.*

MEDICAL JURISPRUDENCE.

67. *Case of Poisoning with Belladonna.*—A man, æt. 46, swallowed, by mistake, forty-four grains of the powder of belladonna; an hour afterwards, he was attacked with violent head-ache, especially over the orbits; the eyes became of a red colour, which quickly extended over the face, and lastly over the body, so that within a few minutes the whole skin exhibited an intense uniform redness, such as is observed in scarlet fever; at the same time the patient felt violent pain and heat in the throat, and along the œsophagus, and on examination the fauces were found strongly inflamed. These symptoms were accompanied by a very painful irritation of the urinary passages, especially of the neck of the bladder, with a constant but fruitless desire of making water. Copious bleeding, emollient clysters, fomentations on the belly, and twenty-five leeches to the hypogastrium, relieved the patient in some degree, and within twenty-four hours, he was perfectly recovered.—*Nouv. Biblioth. Méd.*

68. *On the Tests by which Morphine may be made known in cases of Poisoning.* By V. BALLY.—"The substance vomited by a dog which had been made to swallow twelve grains of acetate of morphine was a colourless fluid, without odour, slightly viscid. It turned frothy by agitation with solution of gum. It was about three ounces in quantity. Submitted to evaporation in a porcelain cup, it gave a small quantity of yellowish extract, of an odour of juice of meat, of a

bitter taste, a little saltish, and it reddened tournesol paper. This extract, treated with boiling alcohol, separated into two portions, the one flocculent, insoluble, formed of the mucus and of the gelatinous matter; the other, soluble in this liquid, was evaporated to dryness. The latter, redissolved in a little water, let fall floccules of greasy matter. Submitted to slow evaporation, the aqueous solution gave a deposit of prismatic crystals, of a yellow colour, which presented the following properties: they had a bitter taste; a solution of them in water precipitated, by the addition of ammonia, in white floccules. Treated by concentrated sulphuric acid in a small glass tube, they disengaged a decided odour of acetic acid.

"Dissolved in weak nitric acid, these salts immediately gave a dark yellow solution, approaching to the colour of blood.

"This union of properties proved clearly that these crystals were acetate of morphine. The quantity obtained was about three grains.

"The stomach of a cat which had been poisoned by twelve grains of acetate of morphine was boiled for ten minutes in six ounces of distilled water. The filtered liquor was evaporated and treated with alcohol in the way already mentioned. The alcoholic solution was slightly yellow, and it furnished by evaporation an extract of a similar colour, only a little darker, of a saltish taste, followed by bitter, which manifested, by the addition of a few drops of nitric acid, a good yellow orange colour, approaching to red; phenomena which proved the existence of a small quantity of acetate of morphine.

"But it is remarkable that, in some instances, these reagents will not enable us to discover any trace of morphine in the stomach, intestines, heart, or in the blood taken from an artery a few minutes before the death of an animal which has been poisoned by this substance. A hound was poisoned by twelve grains, but no trace of it could be recognised in any of those parts. Two kittens died from the injection into the stomach of a solution of acetate of morphine, the one of five, and the other of eight grains. The stomach of that which had received the five grains showed unequivocal traces of the poison, easily distinguished by the reagency of nitric acid; whilst in the other nothing of the kind could be discovered. From these facts, and several others of a similar nature, M. Bally concludes, 1st, that it is possible, in many cases of poisoning, to discover, by chemical means, sensible traces of vegetable poison; 2d, that it is always in the viscera to which the poison is first applied that we are to look for its presence; 3d, that the matter thrown up by vomiting shortly after the injection of the poison into the stomach contains sensible quantities of it; 4th, that all the efforts made to discover it in the blood have been fruitless.—*Lond. Med. and Surg. Journ.* Oct. 1828, from *Mém. de l'Acad. Royale de Méd.*

69. *Medico-legal Consultation, on a Case of Amputation of a Thigh affected with Gangrene.*—This memoir, read on the 22d of May, 1828, to the Royal Academy of Medicine, section of surgery, by M. CHAUSSIER, relates to a case which had been brought before the Royal Court of Metz. It is interesting in a medico-legal and pathological point of view, and also as showing what is considered a proper honorarium, in France, for surgical services.

A man, aged twenty-eight years, having fallen from a horse, suffered a compound fracture of the thigh. A surgeon was called, who applied the proper treatment; nevertheless, on the sixth day, on removing the dressings, he perceived that the toes had become gangrenous. He immediately called Dr. Labesse, in consultation, and on his arrival this latter physician found the leg sphacelated to two inches above the knee, and the thigh sprinkled with black and yellow spots. The evil increased so rapidly, that it was evident that a little loss of time would be fatal to the patient. Dr. L. upon the solicitation of the parents, decided to perform, immediately, amputation of the limb. The operation was entirely successful, and the patient was cured after seventy dressings. He enjoys to the present period good health. Nevertheless, urged no doubt by malevolent and envious persons, the patient refused to pay the fee, (one

thousand dollars,) and moreover wished to prove that Dr. Labesse had amputated against the rules of surgery. M. Chaussier, in his memoir, protests strongly against such excessive ingratitude, and proves that the rule not to amputate sphacelated limbs before a line of demarcation is formed, is too absolute; that it is correct only in cases of gangrene from an internal cause. The experience of Larrey, Yvan, Samuel Cooper, Hutchinson, Lawrence, Thomson, Hennen, &c. has proved that amputation of a sphacelated limb, produced by an external or mechanical cause is indicated, if the life of the patient is in danger, although the gangrene is not circumscribed; therefore, the amputation performed by Dr. Labesse was performed according to the true rules of the art. The fee demanded by Dr. Labesse, and which the patient considered as excessive, appears to M. Chaussier too moderate, and he has fixed it at \$1320.

In a postscript to the memoir, there are some observations on gangrene from internal and also from external causes, and two cases of gangrene from mechanical cause, followed by death, in consequence of amputation of the limb not having been performed in proper time.

The patient of M. Labesse has desisted from his appeal to the Royal Court of Metz, and he has paid the costs, and the fee legally due his physician.

70. *Case of Supposed Poisoning.*—As the lives of individuals often depend upon the testimony of medical men, every fact that can tend to render the latter cautious, or enable them to form correct opinions on subjects respecting which they are likely to be called on for evidence in a court of justice, becomes of extreme interest, we therefore copy from the *London Medical and Physical Journal*, for October last, the following case, which occurred in France, in 1818. "A woman was attacked with violent pains in the stomach, and general symptoms of illness, after having walked some distance on a very sultry day. She had taken no refreshment whatever until her return home, when she partook of a light meal with her husband and some friends. From the commencement of the attack, she was tormented with raging thirst; she had frequent stools, accompanied with great pain in the bowels. She did not vomit. Upon examination post mortem, the stomach was found to be in a state of inflammation, and there was every appearance of some violent caustic having been applied. In some parts the coats of the stomach were entirely destroyed. The pyloric portion was of a deep brown colour, and contracted. After this examination, Dr. R. declared it to be his opinion that poison had been administered. The same opinion was also given by several physicians and surgeons, who were consulted. It was determined that the destruction of the stomach must have arisen from some caustic material, *for that no disease could destroy so large a portion of living animal substance.* Chaussier was fortunately called upon for his opinion: he very properly deprecated the rash and ignorant decision of his brethren, who had made no attempt to prove the presence of poisonous matter. He stated that the same appearances, and the same sudden accession of symptoms, frequently occurred from internal disease. The husband of the woman was consequently acquitted. There was not the slightest grounds for suspicion in this case, excepting the manner in which the woman had been attacked, and the destruction of the stomach which was detected upon examination after death."

CHEMISTRY.

71. *Action of Brome and the Cyanuret of Brome upon the Animal System.*—M. BARTHEZ, attached to the Military Hospital of the Royal Guard, has occupied himself with extensive researches for the purpose of ascertaining the effects of brome, hydro-bromate of potass, deuto-bromuret of mercury, and the cyanuret of brome, upon the animal economy.

From his experiments with the first and last named of these four substances,

he has drawn the following conclusions: 1st. Brome completely dissolved in distilled water, and injected into the veins, produces death in doses of ten or twelve drops, by coagulating the blood, without affecting the nervous system. 2d. Introduced into the empty stomach, the œsophagus being immediately tied, it causes death in three or four days; whilst if the stomach be filled with aliments, this substance is converted into the hydro-bromic acid, the poisonous effects of which are infinitely less active. Should the œsophagus not be tied, it will require from fifty to sixty drops to cause death, and care is still necessary to prevent its being rejected soon after being taken. 3d. Brome taken in an infusion of coffee, and swallowed before it has had time to be converted into bromic acid, will equally cause the death of the animal. 4th. Brome introduced into the stomach of a dog, in the dose of fifty or sixty drops, produces death, unless soon followed by vomiting. 5th. It has a strong analogy in its operation with iodine, and consequently ought to be placed next to it in the scale of irritating poisons. 6th. The cyanuret of brome ought to be ranged, like the cyanuret of iodine among the narcotico-acrid poisons. 7th. Injected into the cellular tissue in the dose of five or eight grains, it produces mortal symptoms, without however, always inducing death. 8th. Introduced into the stomachs of dogs, it only causes death in doses of four or five grains, and the dose requisite to kill a rabbit, under similar circumstances, is infinitely less.—*Archives Générales*, Sept. 1828.

72. *Reduction of the Sulphuret of Arsenic*.—M. Berzelius points out the following as one of the most certain means of ascertaining the most minute portions of arsenic contained in the precipitate obtained by the hydro-sulphuric acids and the hydro-sulphates. The precipitate is to be enclosed in a glass tube, stopped at one end, about four or five inches long, and of the calibre of a large quill. This tube is to be warmed by a lamp of alcohol, over which it is to be held obliquely in such a manner as that the flame will be directed immediately above the part where the substance to be reduced is placed so that the vapour of the sulphuret of arsenic will be obliged to pass this heated point: after this, if the vapour passes slowly it will be completely decomposed. The sulphurous acid produced will disengage itself and the arsenious acid be deposited on the sides of the tubes. The tube is drawn out (*étirée*) after being heated, the arsenious acid is pushed into the portion of the tube drawn out (*étirée*) and by heating it, it is made to pass in vapour upon burning charcoal, which effects its reduction. Charcoal in lumps is to be preferred to the powder as the latter is dispersed by the heat.—*Journal de Chem. Méd.* Sept. 1828.

MISCELLANEOUS.

73. *Constitution of the Year*.—"When Sydenham treated of the constitution of the year, he meant an epidemic, or a certain morbid condition of the human body as an effect, from a certain state of atmosphere as a cause, which he termed the constitution or disposition of the year. The effect was a matter of observation, and certain: the cause admitted of disputation."

"If Sydenham had flourished in this era he would have termed the constitution of the years 1825, 6, 7, and 8, intermittent, and it has been combined with an unusual degree of neuralgic affection, from hemicrania to the most intractable forms of *tic douloureux*. A similar combination of disease took place in the year 1809, but has not prevailed for a quarter of a century to the extent which it has done during the last two years. It commenced in the spring of 1825, having been preceded by an unusual humid autumn, during which the north of Europe was flooded to a very alarming extent. It was ushered in by a very fatal peritonitis, both simple and puerperal, in the human subject, and by a still more destructive wet rot amongst sheep. A wool merchant informed

the editor that during an experience of forty years, he had never known it so fatal: he estimated that a tenth of the sheep throughout the kingdom died. But the destruction in particular situations was excessive. A resident near Romney Marsh informed him that some of the farmers lost all their flock; he named one who had lost twelve hundred sheep. It was at the end of February in that year, (1825,) that an experienced surgeon at the west end of London said to him, that he had lost four patients in the puerperal state during that month, of what appeared to him to be peritonitis previous to the post mortem examination, which did not explain to his satisfaction the nature of the disease, he having found, in two of the cases, only a little bloody serum extravasated into the peritoneum. He added, that he could not understand it, and was persuaded that more would be heard of it. His prediction was verified. At the east end of London, not far from the river, this disease proved still more fatal during the month of March. One surgeon informed the editor that he had lost seven, another four, in all of which the disease was treated at the instant of its formation by active blood-letting. A physician-accoucheur, who attended in consultation many of these cases, stated to him, that out of thirteen cases, eleven died, that all which had been bled died, and that the only two which recovered had not been bled, having been treated by turpentine. The summer proved remarkably dry and hot: during July not a drop of rain fell in London. The intermittents commenced with anomalous inflammatory affections, lapsing into continued fever, and sliding into a quotidian or tertian type, rheumatism, subject to dangerous metastasis, erysipelas of an untoward kind, and some cases of malignant sore throat, which had not occurred for a long period before. The autumnal season was humid, and the continued fevers, falsely called typhoid, and approximating more to the remittent form, proved insidious, the fatal collapse occurring early and unexpectedly. The following summer proved still more dry, there being scarcely any rain even in June, and not less hot, so that the pulse crop failed. The character of disease was less malignant, but the same type was still preserved. Puerperal peritonitis was much less fatal, but even in this year, one surgeon at the east end of the town lost seven women in a very few weeks, under a varied treatment. 1827 being rather cold and humid, intermittents, remittents, and neuralgic affections prevailed in their greatest extent; and to conclude in the language of Sydenham, the constitution of the year has not changed in 1828. This fatal peritoneal disease appears to have borne the same relation to peritonitis that the pneumonia notha does to pneumonia, not only in the serous, or sero-sanguineous effusion, instead of coagulable lymph, but also in the complete inability of the patient to bear the lancet. The editor's limits prevent him from pursuing this important subject further at present."—*Journal of Morbid Anatomy, &c. Vol. I. Part I.*

74. *Hydrophobia*.—"In a village near Posen, a pig, destined to be killed, was bitten by a rabid dog. Some time after, symptoms of hydrophobia appeared in the animal. The proprietor, not wishing to let it die naturally, killed it, salted the meat, and he and his family ate it in a few weeks. Long time after this, Dr. Suttinger, the medical attendant of the family, having heard of this circumstance, went to see them, and found them in perfect health, and perfectly tranquil about the issue, for they had an idea that there was no danger in eating any part of the animal, except the head, and as they had cut this part off, and buried it, they thought that they had nothing to fear. All the members of this family have continued well ever since."—*Lond. Med. and Surg. Journ. September, 1828.*

AMERICAN INTELLIGENCE.

Account of a Singular Spasmodic Affection of the Respiratory Organs. By R. J. CLARKE, M. D. of New Orleans.—The young lady whose case forms the subject of the following report, was, at the time of the first occurrence of the uncommon symptoms to be detailed, in the twelfth year of her age, of extremely fair skin and hair, light blue eyes, tumid upper lip, and lively temperament, with other marks of strumous diathesis. She had suffered in Philadelphia in the winter of 1825, with an attack of influenza, which left her in a state of great debility, with cough and expectoration so protracted as to excite apprehension of her sinking into a pulmonary affection, and of which she only recovered after some months enjoyment of country air and a milk diet. After this she had enlargements of the submaxillary glands, on each side, which suppurated slowly and left chronic tumefactions, continuing to discharge a thin purulent secretion for a considerable time. In the fall of this year she was brought out to Louisiana, with the hope that a warm climate, of which she was a native, would dissipate the apparent tendency to scrofulous affections, and through the winter her health improved. To the glandular enlargements the hemlock plaster was applied and worn for some time, under which treatment they gradually healed and nearly disappeared. Immediately subsequent to this, in the month of May, 1826, she was attacked with a mild remitting fever, and it was in the lingering and imperfect convalescence which followed, that the first manifestations were observed of the singular train of symptoms with which she continued so long afterwards to suffer. The first complaint that attracted attention was a slight but constant pain in the head, accompanied by an occasional disposition to vomit, particularly in the morning, great loss of appetite, and general listlessness and dejection. In June, she went into the country, but here getting gradually worse, in August was brought back to town, and placed under the joint care of Dr. Heermann, of the United States Navy, and myself. At this time she still complained of pain only in the forehead. The efforts to retch were now, however, frequent, and afterwards became nearly continual, though with no ejection from the stomach. The bowels were generally constipated, while in the state of the pulse and skin, with the exception of a slight loss of tone and general relaxation, no derangement was to be remarked. An emetic had been administered without any relief, and some active cathartic doses were now given, consisting of a combination of aloes, calomel, and scammony, in the selection of which articles we were influenced by the impression that the symptoms probably derived their origin from the irritation of an incipient uterine development. To relieve the head, leeches were also at this time applied to the temples and behind the ears; but no benefit accrued. The retch, or noisy effort to vomit, gradually and imperceptibly changed into violent spells of spasmodic coughing, attended with convulsive movements of the whole muscular system. They were entirely involuntary, the subject of them declaring that she was without the power of exercising any control over them whatever, and that they came on without any sensation of tickling, pain, or oppression, which usually precede an ordinary cough. There was, in fact, no consciousness on her part of any irritation that could excite them; they were not attended with any expectoration, and by an examination of the fauces, we were satisfied that there was no elongation of the uvula, or any other perceptible source of irritation existing there. From this time the spells increased in frequency and duration until they became nearly constant, occupying in each distinct paroxysm from five to ten minutes, while the intervals were by no means so long, and thus continuing from the moment of

awaking in the morning, until, under the influence of opium or some other powerful narcotic, or in mere exhaustion, the unhappy sufferer would fall asleep, when there was always an entire suspension of the disease.

The sound emitted in this singular affection was observed to be extremely different from a common cough, the occasional occurrence of which in the intervals affording us an opportunity of remarking the distinction; nor was it at all like that of pertussis, but was produced by the expulsion of air in short and continuous spasmodic contractions of the respiratory muscles without any participation in the movement on the part of the pharynx and lips, while in the intervals the voice and respiration were altogether unaffected. About the 8th of September the paroxysms had arisen to an excessive degree of violence. They were attended with general muscular spasms and a partial or entire suspension of the action of the heart and arteries, and the distress of our patient seemed to have reached the utmost aggravation compatible with existence. Up to this time, as has been stated, we had been able to procure her some hours exemption every night in sleep, but the remedies employed in effecting it could no longer be retained on the stomach; they had in fine become odious to her, and she besought us in preference to let her cough. Thus the last day and night had passed without an interval of ten minutes duration, and every moment appeared likely to terminate her sufferings. All the most powerful antispasmodics had been given in enormous doses; the warm bath as well as cold affusions had been used; the chest, both anteriorly and behind, had been covered with vesicatories, and farther than has been stated without even temporary alleviation; when, while under the use of prussic acid in large doses, she suddenly sunk into a state of great prostration, and it was presumed she was dying. Vomiting spontaneously, she threw off a considerable quantity of white mucus, of some consistence, and in globules, and the cough entirely ceased. As nothing of the kind had been discharged before, though she had often vomited freely, it excited some attention, but we were afterwards corrected in the consequence we attached to it, by the circumstance of its being occasionally discharged in subsequent attacks, without being followed by the same relief. From this state of prostration she slowly revived, and on the succeeding day there was a degree of reaction amounting to considerable fever, which gradually subsiding in two or three days more left her quite well.

Subsequently to this she had four distinct attacks of a similar character, at first occurring with some regularity every month, then an interval of two months elapsed, and prior to the last attack, which occurred in May, 1827, a much longer respite was enjoyed of nearly four months. In each of the returns of this affection it was attended with nearly the same symptoms as have been at length detailed, except in their onset, which, after the first, was invariably sudden and unexpected; not preceded by any premonitory retching, but seizing her in the enjoyment of a perfect exemption with the suddenness of an attack of spasmodic asthma, running up rapidly to the extent of its violence, and after a continuance of seven or eight days leaving her with the same abruptness. There was now, too, a complaint of pain in the breast, not felt at first, not acute or severe, but nearly constant and referred always to the upper part of the sternum. In the intervals, at first, she enjoyed perfect relief, immediately recovering her vivacity and appetite, and, as far as the restraint which was imposed on its indulgence admitted, her strength and appearance. But for some time previous to the last paroxysm, she was observed to be affected every morning on awaking, at whatsoever hour that might be, with a slight spell of coughing of the same peculiar character, lasting at first a few seconds only, but gradually increasing in duration up to the time of the last attack, until it occupied thirty or forty minutes, after which she was always entirely exempt for the remaining twenty-four hours. In the same manner she continued to be affected after the attack of May, but in a much slighter degree, the paroxysm being reduced to a few moments continuance, and not manifesting any disposition to increase. What is not a little remarkable among the circumstances of the case, was that

in the course of the winter she was once affected with a common catarrh, a disease of general prevalence among us at that season, without its aggravating in the slightest degree the spasmodic affection of the morning. She was watched with anxiety, but the defluxion from the nose and eyes, with the ordinary cough and hoarseness, all passed off, without having become implicated at all with the distinct symptom which was the subject of our concern.

The result of the measures which were pursued, in the treatment of this embarrassing case, does not, it must be confessed, throw much light upon its nature. During the existence of the paroxysms, the most powerful antispasmodics were resorted to, and administered in doses, which, under less pressing circumstances, would not have been hazarded. The insensibility to their ordinary influence, could be paralleled only by the state of the system in tetanus, and certain other diseases of high nervous irritation, and was another feature of the case worth remarking. Opium, the extract of cicuta, and prussic acid, were the articles in succession, freely employed, the last of which, it was thought, was attended with more benefit, and less distress, than any other antispasmodic medicine which had been used, but yet, with very partial relief. The complaint of pain in the breast early led to a free detraction of blood by leeches, and in one attack attended with unusual febrile action, venesection was carried to the extent of an alarming syncope, but though moderating its violence, it did not abbreviate the usual course of the paroxysm. During the intervals, a seton was at one time worn in the breast for three months, she was subjected to a course of emetics, consisting of ipecacuanha, and the sulphate of zinc, and, after the attack of January, its more inflammatory character induced the adoption of a vegetable diet, and free exercise in the open air. Whether beneficially influenced by these measures or not, our patient evidently improved. The paroxysms became milder, and the intervals considerably longer, while there had been for some time, a gradual improvement in her general health, which relieved us from the natural apprehensions at first entertained, and inspired us with a hope that her singular disease was gradually passing away. As it had, however, been in the previous warm season, that she had fallen into ill-health, it was thought prudent to remove her, during the approaching summer, from a climate where she had suffered so much, while, some general benefit was anticipated from a sea voyage, and sea bathing. Previous to her departure, and while engaged in transcribing some notes of the case, I took occasion, for my further satisfaction, to inspect again the state of the fauces. For this purpose, I called her, in the presence of her family, to a window, that I might have the benefit of a strong light, and after explaining to them my object, examined her throat with great care, but nothing not perfectly within the natural and healthy organization of the parts could be discovered.

During the voyage, according to information derived from her elder sister, who accompanied her, she was affected with an ordinary catarrh of some severity, which, as in the previous instance, run its course without either aggravating or interrupting the short spell of spasmodic coughing with which she still continued to be affected on awaking. On her arrival in Philadelphia, immediately after a distinguished professional character was consulted, who, on examining the throat, discovered now an elongation of the uvula, and conceiving it to be the probable cause of the extraordinary symptoms which were described to him, but which he happily had no opportunity of witnessing, at once removed it. The operation is understood to have been succeeded by some tumefaction of the surrounding parts, on the subsidence of which she was found to be relieved of the morning cough. Since then more than twelve months have now elapsed, the natural changes incident to her period of life have been established, and she has never had any return of her singular affection.

Subsequently to the occurrence of this embarrassing case, believed at the time to be almost unique, an account has been observed in a short analysis with extracts of a recent publication of Mr. C. Bell, styled "Appendix to Papers on the Nerves," in the twelfth number of the *Medico-Chirurgical Review*, of some

curious instances of disease in young females, which, though not very particularly detailed, would appear, by all their important characteristics, to have been identical with the case which forms the subject of this report. There is also a reference to another remarkable instance of the same affection, said to have been recorded some time previously, for which, however, we have in vain searched through a long series of the Review. Of the nature of these singular cases, but one opinion seems to be entertained by Mr. Bell and the accomplished editor of that Journal—that it is an affection of the nerves influencing the organs of respiration—the most susceptible, as it is stated, of the system, derived primarily from the irritation of the development taking place in the uterus and ovaria; and from the age and sex of all the individuals affected, as well as from the uniform result of the cases, a strong confirmation is derived of the pathological explanation they offer. To the author of this paper, as well as to his respectable colleague, it is but due to state that it was the first suggestion that occurred in the instance they were treating, and the fact that the restoration of their patient was very soon followed by the constitutional change which might have been earlier looked for, would seem to warrant them in offering the testimony of her case in support of the opinion referred to. A very different idea it is true, was entertained by the eminent individual who saw her in Philadelphia, in which he was naturally confirmed by the relief which followed the excision of the uvula from that remaining symptom of her disease so often alluded to, the spell of coughing in the mornings. To account for the elongation of that organ having eluded discovery on the previous examinations, it occurred to him that by a temporary contraction of its muscular fibres, it might have been at those moments removed from observation. But this suggestion could hardly be received, when it was recollected that those examinations were made at different periods of the disease; the first when the symptoms were in a state of the utmost aggravation, and the last, when they existed at least in as great a degree as at the time of the removal, by individuals, too, not unacquainted with the distress occasionally produced by an elongation of the uvula, and in this instance, extremely interested in discovering a cause for symptoms which they could neither explain nor relieve. It will also occur to any one familiar with the moderate degree of irritation ordinarily excited by the tumefaction and consequent projection of the uvula, so frequently attendant on a common catarrh, that the affection in this instance to have been capable of producing the horrible train of symptoms with the protracted distress we have detailed, must have been too considerable to have been removed from observation by any transient contraction of which that muscle is susceptible. But an attention to the phenomena of the case is, we conceive, sufficient to decide the impossibility of their having been occasioned by the mechanical irritation of a chronic organic enlargement. After the first paroxysm, which, it is true, came on gradually, but yet without any distress, which could be referred to the throat, all the succeeding ones supervened on a state of entire immunity with suddenness and violence, and in the same manner after a nearly uniform duration of seven or eight days, out of a state of the utmost aggravation, the relief obtained was always sudden, immediate, and complete. With this entire relief of all the symptoms, had they depended on the irritation of a projecting uvula, the cause that produced them must also have passed away; but so suddenly, and so entirely without any perception on the part of the individual affected, a serious elongation of that organ could not have been established, or if that were possible, it would not at least in the same abrupt manner, have been retracted and removed.

The slight cough of the morning which disappeared after its excision, it will be recollected, was a symptom of very late occurrence in the course of the disease, the intervals for some months having been altogether free from it. That an elongation actually existed at the time of the arrival in Philadelphia, cannot be questioned; the consequence, we believe, it can be as little doubted of the catarrhal affection of the voyage, nor would we be thought by any means disposed to impugn the judiciousness of its extirpation. The affection had been

obscure and protracted, and much dread was still entertained of its recurrence, an ample justification for the removal of a source of irritation quite adequate to form an obstacle in the way of a perfect recovery, however little agency it could have had in the original production of the disease. The immediate effect of the measure confirmed its propriety; yet while we acknowledge with pleasure the happy influence it appeared to exert in arresting the still lingering, though momentary paroxysms of the morning, we conceive the subsequent exemption from the severe attacks, cannot be considered but as one of those fortuitous coincidences so familiar to the profession, and which are so often suffered to establish erroneous views of disease, and to attach an undeserved importance to an inefficient or an inappropriate remedy.

To place on record a detailed and faithful history of this extraordinary case, we have considered a duty to the profession. Though happily not of frequent occurrence, it yet appears to have been by no means a solitary instance of the affection, and if little information is afforded as the means of controlling its frightful symptoms, it yields at least in connection with the more satisfactory account of Mr. Bell, the consolatory encouragement that in all the instances that have yet been reported, it has been harmless in its result.

New Orleans, December 9th, 1828.

Since the receipt of the above case, we have seen Dr. Physick. He informed us that in the letter which accompanied the young lady to Philadelphia, the doctor had advised a sea voyage and sea bathing, under the impression that it "might be an anomalous exhibition of scrofulous disease." After the cure had been effected by the excision of the uvula, the above history of the case was forwarded, in which he informs us that he had examined the throat but did not observe any elongation of the uvula, and influenced by some cases, as he states, detailed by Mr. Charles Bell, he inclines to the belief that the peculiar symptoms of his patient were owing to some irritation taking place in the development of the uterus and ovaria. He further undertakes to represent the cure of his patient "as fortuitous," and "of a nature calculated to establish erroneous views of disease, to attach an undeserved importance to an inefficient and inappropriate remedy." It is obvious that these are mere opinions of Dr. Clarke, brought forward after his patient was cured, and however ingenious this may appear to him, prove nothing respecting the cause of the complaint.

In the letter sent with his patient, it will be found that the disease in its first stage was attended with pain in the head, with retchings to vomit nearly constant, and that the gastric irritation was then considered as sympathetic of an incipient cephalic affection, and though treated on that principle, no advantage was derived. "The retchings gradually changed to a convulsive cough, altogether involuntary and uncontrollable, and conveying an impression as if *something obstructed and irritated the organs of respiration.*"* It is pleasing to observe how nearly the doctor came to the true cause of his patient's disease. Dr. Physick asserts that the uvula was elongated when he examined it in Philadelphia, but that it was neither inflamed, swelled, or altered from its natural state, except in length, and exhibited no appearance of what it seems Dr. Clarke, looked for, "a chronic organic enlargement." The unnatural length of the uvula, Dr. Physick attributed entirely to a diminished action of its azygos muscle not supporting the organ sufficiently. Dr. Physick informed us that he had met with the organic enlargement looked for by Dr. Clarke, but *that* was not its condition in this patient; so far from being enlarged, it was, if any thing, more slender than common in its transverse diameter. Though Dr. Clarke did not discover the elongation in this instance, the same difficulty in detecting its existence has occurred to other physicians in this city owing to a temporary retraction taking place at the time of the examination.

Dr. Clarke admits that when his patient arrived in Philadelphia, the uvula

* See page 263 of the American Journal, No. II. February, 1828.

was elongated, and attributes the occurrence to a catarrh taken on the voyage; but this cannot be admitted, inasmuch as the organ was not enlarged, swelled, or inflamed, but was found more slender than usual. A common slight catarrh is not frequently productive of an elongation of the uvula, and whenever the inflammation of the mucous membrane in that disease becomes so violent as to have that effect it always produces the painful deglutition which attends what is commonly called a bad sore throat, but no such symptoms are mentioned by Dr. Clarke, as having existed when she was affected with catarrh in New Orleans, and nothing of that was mentioned as attending her cold on the voyage; it was but a slight cold. Besides her cold had ceased when she arrived, and even if the uvula had been somewhat inflamed during its continuance, which from the above considerations is highly improbable, the inflammation and swelling had entirely subsided when Dr. Physick examined the throat. The vomiting in the commencement of this disease is another circumstance that may be satisfactorily understood as arising from the elongated uvula irritating the pharynx, as a feather or the end of the finger produces that effect when placed there. In confirmation of this explanation, Dr. Dewees has lately informed Dr. Physick, that he but a short time since attended a lady distressed with the same kind of vomiting, which resisted all the anti-emetic remedies he prescribed, but which was cured very speedily by an astringent gargle, ordered as soon as he found by examination that the vomiting was owing to the elongation contended for. In this case of Dr. Clarke the disease commenced after a remittent fever, by which we know the strength of muscular action is always more or less diminished throughout the body; why this was to a greater degree in the muscle of the uvula than in others in the same person, we cannot explain; but the occurrence of such a condition in particular muscles is not very uncommon besides in that of the uvula; we not unfrequently see the levator palpebræ superioris in the same condition, preventing the patient from opening the eye, so that the fact is proved, that single muscles sometimes have their power of contraction thus diminished, without the immediate cause being apparent. On this principle the morning cough is easily explained. The muscular system during sleep is always relaxed to a greater or less degree. The uvula, from the previous weakness of its muscle, of course descended, and irritated the glottis, but on rising, that muscle, along with others of the body, being roused into action, the cough occasioned by its previous descent was of short continuance. Again, if the violent fits of coughing were owing to a strumous condition of the system, or had their origin from the supposed sympathy mentioned by Dr. Clarke, the morning cough was also attributable to the same causes, for according to the doctor's express declaration, this morning cough had the same peculiar character. Now we would ask whether it is possible for the operation of snipping off a small piece of the uvula, to cure struma, or to remove the imagined sympathy? The voyage certainly did neither, for she brought that cough with her, which never ceased until the operation removed it almost immediately, and from the lapse of time since it appears it effected a permanent cure. No doubt the temporary abatements and returns of the more violent states of this complaint arose from the more or less complete action of the axygos muscle in suspending the uvula. Much more might be added to prove that occasional elongation of the uvula was the whole cause of this young lady's sufferings; we shall only add at this time, that such a state of the uvula in producing a convulsive cough is now so generally known and acknowledged, that any further arguments seem to us superfluous. The effect of the operation is now *known* not to be *fortuitous*, nor does it lead to erroneous views, giving an undue importance to an inefficient and inappropriate remedy.—Eds.

Case of Diabetes successfully treated. By SAMUEL JACKSON, M. D. of Northumberland.—During the last winter, Dr. Price, of Sunbury, requested me to visit with him Samuel Auchmuty at Shamokin Falls. This patient had been attended by the doctor during many months, and salivated for diseased liver, at-

tended with violent, dry cough. He was now greatly emaciated and unable to leave his bed; appetite voracious; thirst unceasing: cough troublesome at night and without expectoration; skin steadily dry, harsh, and dry; pulse about 90, and not in other respects very different from natural: his urine limpid, sweet, and passed to the amount of about five and six gallons every twenty-four hours. The diabetes had been coming on gradually for many months before it was mentioned to Dr. Price. The patient had been intemperate in the use of ardent spirits for two years previous to his sickness.

This was the first case of the disease I had been consulted in during a busy practice of sixteen years, and therefore it may be readily presumed that I was by no means *au fait* in the business, or prepared to advise in this difficult matter. But adverting to the vicarious functions of the skin and kidneys, we quickly agreed that the perspiration ought to be restored if possible. This indication was both physiological and practical, having been found useful by Dobson, M'Cormick, as we may learn from Mason Good. To attain this end we directed the patient to take Dover's powder every evening as freely as his stomach would bear it, and at the same time to put his feet for *several hours* into a tub of hot water under the bed clothes, while he lay extended on his back and well covered. He was directed to live almost wholly on animal food, and entirely without vegetables; to drink as little as possible, and in fine, to avoid every thing which could impose labour on the kidneys.

The simultaneous use of the powder and bath had the desired effect, producing a free and comfortable perspiration, not one feeling of which he had known for many months; and in a very few days the skin felt more natural, the urine began to diminish a little, and the patient felt that he was certainly better. The previous prescription was continued, and we directed a tonic mixture of bark, ginger, and iron rust.

The patient improved so rapidly that he became rather careless, and did not persevere as rigidly with his remedies as was desired; still he continued to amend, till in two months his urine was reduced from five and six gallons in the twenty-four hours to about two quarts, and his skin was rendered natural to the touch, as also healthy in its functions. In fine, the cure appeared to be complete, the urine being of its natural colour, and the patient riding abroad with advantage, his thirst and morbid appetite gone, and his cough gradually wearing away as he recovered strength.

He continued to improve in his general health during the summer, but I am sorry to state, that he died without my knowledge of bilious fever in the month of September, and that no examination of the body was made. This unfortunate patient was yet fortunate in living to afford an instance of the triumph of reason in medicine, over blind transmitted empiricism.

It is very possible that the facility of cure in the above case was altogether owing to the long-continued and judicious use of mercury, which Dr. Price had instituted for the cure of the liver and lungs. This had most probably removed some lesions or morbid associations which would have proved a serious obstacle to the just operation of the diaphoretic and tonic remedies. It is worthy of notice, however, that the mercurial excitement had no tendency to cure the urinary disease; nay, the diabetes having begun before the mercury was used, increased steadily during all this time the medicine was in operation. Thus it is in many other diseases—mercury does not absolutely cure them, but it prepares the system for the curative operation of other medicines, or of nature herself.

Observations on a new preparation of Copaiva. By GEORGE W. CARPENTER, of Philadelphia.—Balsam Copaiva is admitted by all, to be one of the most nauseous and disagreeable articles of the *materia medica*. Disguised or mixed as it may be, its unpleasant nature is still manifest, and little, if at all diminished, communicating its nauseous taste, and its disagreeable odour to the breath, for several hours after each dose, and frequently acting as an emetic or cathartic,

and its effects are thus lost. From these circumstances, its use is frequently abandoned, in cases where it otherwise would be of the highest utility, and even where it is almost indispensable, and other remedies, much less efficient are substituted, thus protracting the cure.

Since the introduction of this remedy down to the present period, it has ever been a desideratum to obviate these inconveniences, and it is a circumstance not less unfortunate and much to be regretted, than it is singular, that, amidst the rapid march of improvement and discoveries, (which forms a peculiar feature in modern chemistry, and pharmaceutical science,) an improvement in the exhibition of copaiva should so long have evaded the vigilant researches of the critical and scrutinizing chemist and pharmacist.

It affords me, therefore, much pleasure, to be able to inform the medical faculty, that I have succeeded in consolidating copaiva, to a consistence for forming into pills. The consolidated copaiva is the oil and resin united, and consequently, possesses all the properties of the balsam.

It may be made into four grain pills, and one or two pills taken three times a day, two pills are equal to thirty drops of the balsam; these pills may be taken without the least inconvenience, neither communicating taste, nor imparting odour to the breath, it is also retained without the least disquietude or uneasiness to the stomach, and I am informed by Dr. Rousseau, it does not purge in large doses.

This article differs very essentially from what is termed extract, or resin copaiva, being not in the least deteriorated in the preparation, nor at all weakened by admixture of any foreign substance, for the purpose of giving consistence. It is particularly recommended for its numerous advantages over the balsam, and all its preparations. As the oil of copaiva is an active preparation, it is the best mode of using this article; for, being united with the resin, it may be made into pills and taken without experiencing the nauseating taste of the oil; while, the oil alone cannot be taken, otherwise than in draught, which will subject it to the same inconveniences with the fluid balsam, having its disagreeable taste, with its unpleasant effects.

The Consolidated Copaiva is manufactured and sold at George W. Carpenter's Chemical Warehouse, No. 301, Market-street, Philadelphia.

Case of Aneurism of the External Iliac Artery, treated successfully by tying up the Vessel. By J. RANDOLPH, M. D. I performed this operation on the 28th of October, 1828. My patient's name was George Hitner,—aged 46 years, by profession a printer. Rather more than two years before this time, he perceived, upon getting up one morning, a small tumour in the right groin, which then was not larger than a hazel-nut, and, upon being pressed, slipped from under the finger. Previous to this time he had enjoyed excellent health, and was accustomed to take a great deal of exercise. He did not pay much attention to this appearance till about June, 1828, when, being engaged in printing a paper for one of the medical journals of this city upon the subject of aneurism, he was struck with the similarity of his symptoms with those described in the paper, and was induced from this to suspect that he was affected with the same complaint. He now showed it to Dr. Bell, his family physician; who immediately pronounced it to be an aneurism, pointed out to him its nature, and advised him to submit to an operation for its cure. By this time the tumour had increased very considerably, and pulsated with great violence. Through the politeness of Dr. Bell, I first saw him in the beginning of October; and, upon examination, found the tumour situated in the right groin, extending below, and a little above Poupart's ligament; its longest diameter now measured about five inches, its shortest nearly four inches. In consequence of the patient's having recently suffered from an attack of intermittent fever, it was deemed proper to postpone the operation for a short time. On Tuesday, the 28th of October, at ten o'clock, A. M. I proceeded to the operation in the presence of Doctors Physick, Her-

No. VI.—Feb. 1829. 62

ner, Bell, Gillingham and Dunbar, and Mr. Dorsey, the patient having taken, two hours previously, fifty drops of laudanum. Having shaved the hair from off the pubes of the side to be operated upon, an incision was made, commencing about one inch within, and a line or two below the anterior superior spine of the ilium, and continued in a semi-lunar form within its convexity downwards, in the direction of Poupart's ligament, and terminating at the external abdominal ring. The whole extent of this incision was rather more than three inches. After carefully dissecting down to the tendon of the external oblique muscle, this tendon was divided, and the internal oblique and transversalis immediately presented themselves and were cut through upon the director. The finger was then passed down behind the spermatic cord, and the peritoneum slightly removed until the artery was felt distinctly, bounded on its inner side by the vein. I gently separated the artery from the vein with my fore-finger nail, and believing the artery, from its feel, to be in a perfectly sound state, I passed the ligature under it without the least difficulty, by means of Dr. Physick's needle and forceps; I now tied it as firmly as possible, and the pulsation in the tumour instantly ceased. Two small arteries were cut before exposing the tendon of the external oblique, which were taken up. The patient complained very little, during the operation, which occupied exactly sixteen minutes. The pulse, for several days previous to the operation was 80. A quarter of an hour before the operation it was 72; a quarter after, it was 64. At 4 o'clock, P. M. it rose to 76; at this time the temperature of the right limb was 90 deg. Fahrenheit, that of the left, 95 deg. Fahr. At 11 o'clock at night, the pulse was 80, full and regular. The difference in temperature between the two limbs continued about five degrees. The pulse continued about 80 throughout the night.

On the second day of the operation, I was pleased to hear my patient say, that he had enjoyed a tolerably good night's rest. The pulse at 9 A. M. was 76, and very regular. But little difference could be perceived by the touch in the temperature of the two limbs, although the thermometer showed it to be between five and ten degrees lower at the toes of the right than of the left: at the knees, the temperature was the same. The pulse did not rise above 80 throughout the day.

On Thursday morning, the third day after the operation, I found he had passed a good night; complained of nothing but fatigue from lying in one position; pulse throughout this day 75. Saturday, fifth day after the operation, I removed the first dressings, and found a considerable part of the wound united by the first intention: the granulations in the remaining part appeared quite healthy. The ligature was surrounded by healthy pus. As his bowels had not been moved since the operation, he this day took some rhubarb and magnesia, which was the first medicine given to him since the operation. On the twenty-second day, the ligature came away, and a few days after he was permitted to get up and walk about the room, which he was able to do with but little inconvenience. The tumour in the groin, is now very perceptibly diminished, and he walks about with great ease. I at first felt considerable apprehension lest the limb, in consequence of its being deprived of its usual quantity of blood, should become gangrenous, more especially from pressure, by its lying too long in one position: in order to obviate this, I had the position of the limb changed every hour. I also had a complete bed made for it of carded wool, which was changed whenever it became hard;—and at each visit I gently rubbed the parts about the heel and ankle with my hand, or a piece of soft flannel. In case any numbness existed, (and there was at times a slight numbness in the toes,) this always relieved it. The patient compared the friction of the toes to the winding up of a clock; he said they would run very well after the friction, until my next visit.

In conclusion, I would observe, that the great facility I had in passing the ligature under the artery by means of Dr. Physick's forceps and needle, confirms me in the opinion, that it is the best instrument ever invented for the purpose of tying up deep-seated vessels. I would also recommend, that the needle

should be made of steel, in which case, the surgeon will be able to push the instrument through the cellular substance surrounding the vessel without using his knife at all; by which means the artery need be but very slightly denuded, and the danger of the operation will be considerably lessened.—*North Amer. Med. & Surg. Journ.* Jan. 1829.

Ulceration of the Kidneys.—Professor WARREN has published in the *Boston Medical and Surgical Journal* some interesting cases of ulceration of the kidneys, with observations. The disease, he says, is of not unfrequent occurrence; but the obscurity of its symptoms causes it to be mistaken for disease of the bladder or urethra, and to the great distress, and even destruction of the patient, the treatment is directed to the urethra or bladder, instead of the real seat of the disease. Whether the disease is ever curable, Dr. W. knows not; the treatment, however, that he recommends, is venesection in the commencement, and afterwards the frequent application of leeches to the loins and perinaeum; the warm bath; mucilaginous injections with laudanum, into the rectum; deep issues in the back over the affected kidney; mucilaginous drinks taken very copiously; the mildest regimen, and the constant use of opium.

Transylvania University.—We are indebted to the politeness of the professors of this university for a catalogue of the officers and students in the medical department; from this, we learn with pleasure that the number of students is two hundred and three.

It is stated that the academical department is also in a very flourishing condition, under the care of President Woods. The number of students, including those in the preparatory school, is stated to be one hundred and fourteen.

Dewees's Practice of Physic.—Dr. DEWEES is preparing for publication a system of practical medicine. This work, we have the best authority for asserting, is not intended as a popular one, as has been announced, but for the profession. It will be strictly a practical book, divested as far as possible of theoretical disquisitions, and will contain the result of nearly forty years experience.

Cazenave and Schedel's Synopsis of the Diseases of the Skin.—MESSRS. CAREY, LEA & CAREY have published an excellent translation of the above work, which we do not hesitate to pronounce the best that has yet appeared on the diseases of which it treats.

New Publications.—The second edition of Ellis's Medical Formulary, with numerous additions; and Arnott's Elements of Physics, from the third London edition with additions, will be published in a few days.

MEDICAL INTELLIGENCE OF GEORGIA.

The Board of Physicians held their annual meeting at Milledgeville, on the first Monday in December. There were forty-four applicants for a license to practice medicine; forty of whom were licensed, twenty on the presentation of diplomas, and twenty after presenting theses, and passing an examination.

Dr. John Walker, of Madison, Morgan county, was elected a member to fill the vacancy of Dr. Powell, who had forfeited his seat according to a bye-law of the Board, and Dr. Ignatius P. Garvin, of Augusta, was elected in place of Dr. Baber, resigned.

The Central Medical Society closed its meetings on the evening of the 5th December. The most interesting communication read before the society was on Malaria, or Miasma—its existence being altogether denied by the author, Dr. A. Jones, of Lexington, which gave rise to a great deal of discussion, which was continued for two evenings, without bringing it to a close.

The officers elected for the ensuing year, are as follows:—

Dr. *Henry Branham*, President.

Dr. *Thomas Hamilton*, 1st Vice President.

Dr. *Benj. A. White*, 2d Vice President.

Dr. *John Walker*, Corresponding Secretary.

Dr. *A. Jones*, Recording Secretary.

Dr. *Weems*, Treasurer.

Dr. *Gorman*, of Milledgeville, Orator.

The following new members were elected, viz.:—Drs. *Cooper*, of Columbia, *Lamar*, of Macon, *Joel Branham*, of Putnam, *Boswell*, of Eatonton, *Jones* and *Wuddel*, of Madison, and *Waring*, of Savannah.

A code of medical ethics, recommended for the government of the profession throughout the state, was reported by Dr. Walker, Chairman of a Committee, appointed last winter. It was amended, adopted, and ordered for publication.

The following resolution, on motion, was adopted:—

Resolved, That the thanks of the society be tendered to Dr. *Jones*, for his oration, delivered before the society, on Tuesday evening, 2d inst. and that a copy be requested for publication.

A communication from Dr. *H. Hull*, was read before the society, on an endemic jaundice, which lately prevailed in Athens.

The society then adjourned till the first Monday in December, at 7 o'clock, P. M. 1829.

NEW VACCINE REGULATION IN PHILADELPHIA.

The undersigned having been appointed vaccinating physicians, under a new ordinance of the select and common councils, respectfully announce to the medical public, that in addition to their other duties, they will keep a constant supply of fresh, genuine vaccine virus for the accommodation of the profession. By a provision in the aforesaid ordinance, they are obliged to furnish the city practitioners gratuitously, which they will at all times do with great pleasure. But owing to the great demand for virus from all parts of the country, to which, from their public position, they will necessarily be subjected, they have determined, after free consultation with their medical friends, to require a small remuneration for the extra trouble which they will incur by this arrangement. Applications, therefore, (post paid,) from any part of the United States, addressed to either of the undersigned, and enclosing three dollars, will meet with prompt attention.

DAVID C. SKERRETT, M. D.

No. 153, S. Tenth street.

WM. CARLL BREWSTER, M. D.

No. 150, S. Fifth street.

We cheerfully acquiesce in the above plan, and have no hesitation in stating our belief that the duties it proposes will be faithfully executed by the vaccinating physicians.

PHILIP S. PHYSICK, M. D.

N. CHAPMAN, M. D.

WILLIAM GIBSON, M. D.

THOMAS C. JAMES, M. D.

ISAAC HAYS, M. D.

THOMAS T. HEWSON, M. D.

W. E. HORNER, M. D.

HENRY NEILL, M. D.

J. K. MITCHELL, M. D.

THOMAS HARRIS, M. D.

Philadelphia, January 6th, 1829.

Editors of other medical journals will please insert the above circular.

INDEX. to vol 3

A.

Actual cantery in hiccough, 209.
 Adams's case of rupture of the left ventricle, 446.
 Alison on tubercles, 434.
 Aloes, 460.
 Ammoniacal sulphate of copper in epilepsy, 462.
 Amaurosis, with cataract, 216.
 ——— treatment of, 466.
 Amnesia, 272, 452.
 Amputation, 223, 229.
 Anasarca, 212.
 Anatomical collection at Breslau, 233.
 Ankle-joint, swelling of, 247.
 Aneurism, 489.
 Angina pectoris, 447, 448.
 Animal tissues, structure of, 186.
 Anomalies, 441, 442.
 Anus, cancerous excrescence of, 216.
 Aorta, obliteration of, 201.
 Armstrong's morbid anatomy, notice of, 177.
 Arnold on paruria erratica, 41.
 Arnott's elements of physics, 181.
 Arsenic, reduction of the sulphuret of, 480.
 Arthrosia, 25.
 Astragalus, compound dislocation of, 109.
 ——— double luxation of, 473.
 Axillary aneurism, 25.
 Axilla, cancerous tumour of, 222.

B.

Bally on morphine, 459, 477.
 Bartlett's account of La Charite, 369.
 Battley on aloes, 460.
 Beclard's case of fistula of parotid duct, 470.
 Belladonna, poisoning with, 477.
 Berlyn's case of hemiplegia in an infant, 455.
 Bevan on the injurious effects of sulphuric acid whilst suckling, 212.
 Billard on diseases of children, 165.
 Birth, five children at a, 190.
 Bladder, rupture of, 452.
 Blind, institution for, 231.
 Blood, coagulation of, 443.
 Bostock's analysis of cutaneous perspiration, 229.
 Bouillaud, anomalies in the anatomy of the kidneys, 441.
 ——— diseases of the kidneys, 449.
 Boulland on tubercles, 457.
 Brown's medical essays, 438.

Brain, diseases of, 87, 94, 187.
 ——— Majendie on, 157.
 Broughton on the use of mercury in venereal complaints, 209.
 Brome, action of, 479.
 Brune on cancer, 221.
 Burne on typhus fever, 422.

C.

Callaghan on the topography and diseases of Western Pennsylvania, 34.
 Carotid, ligature of, 217.
 Carpenter on Copaiba, 488.
 Caste's case of superfetation, 191.
 Castle's manual of surgery, 183.
 Cataract, with amaurosis, 216.
 Caustic paste, 461.
 Cazenave and Schedel on the diseases of the skin, 162, 491.
 Cerebellum, tumour of, 203.
 Chelius on colchicum autumnale, 461.
 Chervin on yellow fever, 232.
 Children, diseases of, 165.
 Chloride of soda in ptyalism, 213.
 ——— of lime as a disinfecing agent, 460.
 Chomel on mollescence of the stomach, 202.
 Circular ligatures in intermittents, 462.
 Clarke's case of spasmodic affection of the pulmonary organs, 482.
 Cold air, respiration of, in pulmonary diseases, 53.
 Constitution of the year, 480.
 Copaiba, new preparation of, 206, 488.
 Cornea, cure of spots of, 214, 467.
 ——— diseases of, 324.
 Collin on the stethoscope, 182.
 Comparative anatomy, 165.
 Cox on croup, 56.
 Croup, 56, 207.
 Cross's case of rupture of left ventricle, 446.
 Cranium, fracture of, 472, 476.

D.

Davis's case of swelling of the ankle-joint, 247.
 Davy on the coagulation of the blood, 443.
 ——— on the cure of strangury, 463.
 ——— on the effects of the sun's rays, 433.
 ———'s new mode of preserving anatomical preparations, 432.
 De Fermon on the connexion between respiration and circulation, 191.
 ———'s case of gradual abolition of the senses 442.

- Demour's foreign bodies in the puncta, 214.
 ———'s case of cataract with amaurosis cured, 216.
 Dengue, 3, 233.
 Dewees's practice of physic, 491.
 Diagnosis, Schmalz on, 153.
 Diabetes, 487.
 Dickson on Dengue, 3.
 ——— on the effects of heat, 262.
 Dislocation, 109, 216.
 Docker on chloride of lime, 460.
 Drake on respiration of cold air in pulmonary diseases, 53.
 Dropsy, Wright's cases of, 275.
 Dublanc's new preparation of copaiba, 206.
 Dupuytren's treatment of hiccough, 208.
 ——— of spots of the cornea, 214.
 ——— of herpes, 217.
 Dutrochet on the immediate agent of vital motion, 194.
 Dysentery, nitrate of soda in, 207.
 E.
 Elliotson's remedy for ptialism, 213.
 Encyclopedial Dictionary of the Medical Sciences, 231.
 Epilepsy, 462.
 Ergot, 362, 390.
 Experimental physiology, prize of, 233.
 Eye, affection of, from lightning, 215.
 ——— inflammation of, 465.
 F.
 Fahnestock, on iodine, 347.
 Farhenrosts case of superfætation, 190.
 Fever, Palloni on, 154.
 ——— quinine in, 206.
 Fifth pair of nerves, function of, 187.
 ——— effects of division of, 187.
 Fistula lachrymalis, 216.
 ——— of parotid duct, 470.
 Flaubert on luxations, 467.
 Fæces, retention of, for six months, 195.
 Follots case of luxation, 473.
 Franche's anomaly of the vascular system, 441.
 Frank's case of ruptured uterus, 223.
 Fricke's treatment of syphilis, 212.
 G.
 Gaievsky's case of five children at one birth, 190.
 Galvanism, effects of, on the nerves, 191.
 Gangrene of the lung, 201.
 Gendrin on malformations, 184.
 ——— on anatomical character of leopoma and steotoma, 451.
 Glandular engorgements, ointment for the reduction of, 463.
 Gout, 208, 465.
 Gore's case of angina pectoris, 448.
 Graefe and Walther's Journal, 411.
 ———'s caustic paste, 461.
 ———'s treatment of pannus, 467.
 Guerard's case of metritis, 462.
 Guild's case of bloody infiltration into the labia pudendi, 111.
 Gunshot wound, 220.
 Guthrie on the treatment of inflammation of the eye, 465.
 H.
 Hale's history of the Massachusetts Medical Society, 113.
 Hays on the diseases of the cornea, 324.
 ——— on dengue, 233.
 Heart, diseases of, caused by onanism, 204.
 ——— rupture of the right auricle of, 445.
 ——— left ventricle, 446, 447.
 ——— enlarged, 455.
 ——— polypus of, 455.
 Heat, Dickson on, 262.
 Hecker's Journal, 435.
 Hervey de Chegoin's case of imperforate vagina, 185.
 ——— apparent hermaphrodisism, 185.
 Hæmorrhage, 196, 197.
 Herpes, treatment of, 217.
 Hernia, 220.
 Henderson's cases, 351.
 Heusinger's case of kidney in the pelvis, 442.
 Hemiplegia, 455.
 Hiccough, 209.
 Horner on cholera infantum, 249.
 ——— on nervous system, 87.
 ———'s instrument for separating the sternum, 242.
 Houlton's case of tumour of the cerebellum, 203.
 Howe's case of tracheotomy, 347.
 Huie's case of polypus, 473.
 Hydatids of the breast, 196.
 Hydrocyanic acid, death from, 230.
 Hydrophobia, 481.
 ——— Reed on, 377.
 I.
 Infantile follicular inflammation, 249.
 Inflammation, state of the blood-vessels in, 443.
 Intermittent fever, 462.
 ——— prussiate of iron, &c. 244.
 Iodine, Fahnestock on, 345.
 ——— in gout, 465.
 Ipecacuanha, analysis of, 229.
 J.
 Jacobson's case of habitual hæmorrhage from the mammæ, 197.
 ——— case of anastomosis between the glosso-pharyngean, trifascial, and tri-splanchnic nerves, 442.
 Jackson's case of amnesia, 272.
 ——— clinical reports, 289.
 ——— case of tetanus, 321.
 Jackson on ergot, 363.
 ———'s case of diabetes, 488.
 Jadelot on the treatment of croup, 207.

Jager's case of anasarca, 212.

K.

Kaltenbrenner on the state of the blood-vessels in fever, 443.

Kidneys, 441.

——— diseases of, 449, 491.

Knee-joint, fracture of, 218.

Krimer's case of fistula lachrymalis, 216.

——— on disease of the heart, 204.

L.

Labia pudendi, bloody infiltration in, 111.

La Charite, account of, 369.

Lallemand's case of excision of a cancerous excrescence from the anus, 216.

——— case of excision of a cancerous excrescence from the axilla, 222.

Langenbeck's case of ligature of the carotid, 217.

Larcher on the state of the heart during pregnancy, 442.

Larrey's case of gun-shot wound, 220.

Lathan's case of purpura hæmorrhagica, 213.

Laubreis's case of pregnancy, 224.

Laugier on oleum ricini, 207.

Lebedois's case of poisoning, 225.

Lewis's case of angina pectoris, 447.

Ley's case of nervous disease, 188.

Lisfranc, amputation of the uterus, 228.

——— of the lower jaw, 219.

———'s treatment of amaurosis, 466.

Lithotriety, 221, 468.

Lung, gangrene of, 201.

Luroth on softening of the uterus, 199.

Luxation, ill effect of the attempts at effecting, 467.

——— and fracture of the cervical vertebrae, 15.

M.

Majendie's memoir on the brain, 157.

Malformations, 184, 441.

Mayer on the valves of the pulmonary veins, 186.

———, on nitrate of soda in dysentery, 207.

Mayo's case of affection of the eye, 215.

Massachusetts Medical Society, 113.

Meckel's comparative anatomy, 165.

——— case of obliteration of the aorta, 201.

Medico-chirurgical transactions of London, 166.

——— of Edinburgh, 425.

Medico-legal consultation, 478.

Mende's case of insertion of the umbilical vein in the right auricle of the heart, 441.

Mercury in venereal complaints, 209, 212.

———, metallic, in the human body, 442.

Mestivier's case of gout, 208.

Metatarsus, dislocation of, 216.

Metritis, 462.

Michell on ergot, 390.

Morbid anatomy, 177.

Mojon's Laws of Physiology, 439.

Morphine, 457.

Mott's case of osteo-sarcoma, 100.

N.

Neale on ergot, 408.

Nervous system, 87.

Nitrate of silver in plastic inflammations, 460.

Nitrate of soda in dysentery, 207.

Nymphomania, 463.

O.

Oleum ricini, 207.

Onanism, diseases of the heart from, 204.

Orfila and Lesueur on poisoning, 226.

Osteo-sarcoma, 100, 472, 474.

Ozanam's treatment of nymphomania, 463.

P.

Paillard on phosphorus as a caustic, 207.

Pallas on poisoning, 463.

Pannus, 467.

Paralysis, 15.

Paruria erratica, 41.

Perspiration, analysis of, 221.

——— after death, 443.

Pichon on the action of the uterus, 198.

Phosphorus as a caustic, 207.

Physics, Arnott's Elements of, 181.

Placenta, 199, 206, 224.

Poisoning, 226, 462, 464, 477.

Polypus of the tongue, 473.

Pregnancy with cancer of cervix uteri, 224.

Price's case of enlarged aorta and heart, 448.

Prussiate of iron, 244.

Prussic acid, deaths from, 230.

Ptyalism, 213.

Puerperal peritonitis, 462.

Puncta lachrymalis, foreign body in, 214.

Purpura hæmorrhagica, 213.

Pyroligneous acid in ulcers, 206, 472.

Q.

Quinine and quinquina, 206.

Quinine, new mode of administering, 460.

R.

Racem's case of suppression and retention of urine, 198.

Randolph's case of aneurism, 489.

Raspail on animal tissues, 186.

Reid on tetanus, 133, 377.

Reimoneng, stricture of the urethra, 196.

Renner, instance of cyst containing fœtus, 442.

Respiration and circulation, 191.

Reveille Parise, dressing for wounds, 218.

Rheumatism, 18.

Richet's new mode of administering quinine, 460.

Rigacci's case of polypus of the heart, 455.

Roux on the use of the trephine, 222.

Rutherford's case of rupture of the right auricle, 445.

S.

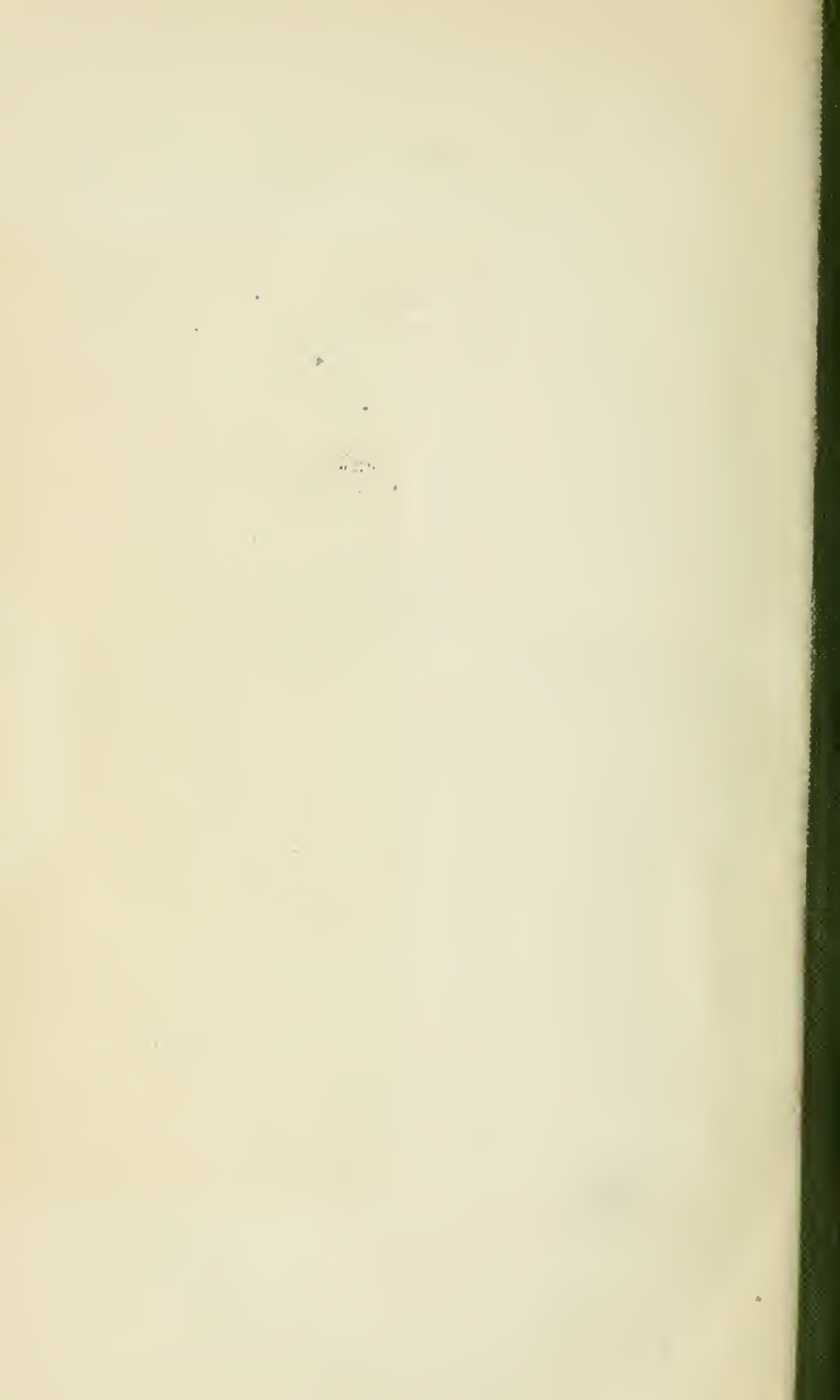
Sandwith's case of dislocation, 216.

Sarcoma of the lower jaw, 219.

Schreyer's case of remarkable disposition to hemorrhage, 196.

Schultz on pyroligneous acid, 206.

- Senn's case of tracheotomy, 471.
 Sensibility, diminution of one side with loss of motion on the other, 188.
 Serres's treatment of paralysis of the iris, 215.
 Skin, diseases of, 162.
 Soemmering on stomach of man, 186.
 Speranza's case of perspiration after death, 443.
 Spinal marrow, effects of division of, 192.
 Stafford's manual of the diseases of the eye, 440.
 Stanley's disease of the brain, 187.
 Staphyloraphy, 1, 223, 471.
 Strangury, cure for, 463.
 Stedman's case of tetanus, 244.
 ——— on the warm bath, 247.
 Stethoscope, 182.
 Stomach in man, 186.
 ———, mollescence of, 202.
 ———, rupture of, 205.
 ———, perforation of, 452.
 Superfoetation, 190, 191.
 Surgery, Castle's manual of, 183.
 Sulphuric acid, injurious effects of whilst suckling, 212.
 ——— detected in the fœtus, 225.
 Syme's case of osteo-sarcoma, 474.
 Syphilis, 212, 232, 462.
 T.
 Tetanus, 133, 214, 377.
 Thune's case of retention of fæces, 195.
 Tracheotomy, 244, 471.
 Transylvania University, 491.
 Tubercles, 434, 457.
 Typhus fever, 422.
 U.
 Ulcerations, chronic, 213.
 Urban on ammoniacal sulphate of copper in epilepsy, 462.
 Urethra, stricture of, 196.
 Urine, suppression of, 198.
 Uterus, action of, from sympathy, 198.
 ———, softening of, 190.
 ———, amputation of, 218.
 ———, cancer of, 221.
 ———, rupture of, 223.
 V.
 Vaccination, 232, 491.
 Vagina, imperforate, 185.
 Valves of the pulmonary veins, 186.
 Vauquelin's analysis of ipecacuanha, 229.
 Venereal complaints, 209, 212.
 Vertebral artery, rupture of, 448.
 Vision after division of the optic nerves, 190.
 Vital motion, 194.
 Vulpes on quinine in fevers, 206.
 W.
 Wallace's case of division of the spinal marrow, 192.
 ——— of fracture of the cranium, 476.
 Warren's cases of staphyloraphy, 1.
 ——— on ulceration of kidneys, 491.
 Ware's case of tubercles in the brain, 94.
 Warm bath in tetanus, 247.
 Watson's case of rupture of the left ventricle, 447.
 Weeks's case of rupture of the stomach, 205.
 Weinhold on the effect of galvanism on the nerves, 191.
 Wells's case of axillary aneurism, 28.
 Western Pennsylvania, topography and diseases of, 34.
 White's case of compound dislocation of the astragalus, 109.
 Williams on the lungs, 182.
 Wounds, plates of lead to, 218.
 Wright's cases treated at the Baltimore Alms-house, 15, 275.
 Y.
 Yellow fever, 232.



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